

*Engraved for the Anglers Museum.*



*Dodd del.*

*Chas. Knapp.*

MR. JOHN KIRBY,  
*the celebrated* Fisherman.

*Published June 4, 1784, by John Fielding, Paternoster Row, London.*

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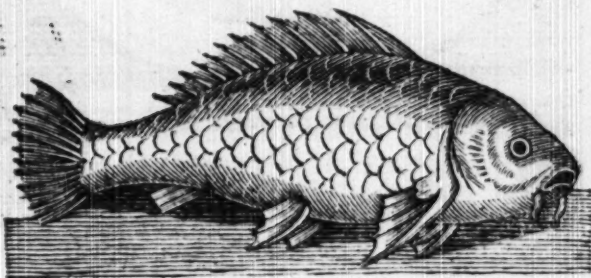


T H E  
**ANGLER'S MUSEUM;**  
 OR, THE  
 WHOLE ART OF FLOAT AND FLY  
**F I S H I N G.**

CONTAINING,

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|--|--|
| <p>I. The Nature and Properties of Fish in general.</p> <p>II. Rules and Cautions to be observed by young Anglers.</p> <p>III. The Choice and Preparation of Rods and Lines.</p> <p>IV. Of Float-fishing, and of live and dead Baits.</p> <p>V. Of Fly-fishing, and the Preparation of artificial Flies.</p> | <p>VI. An Account of the different Sorts of Fish, their Haunts and spawning Times, and Seasons to angle for them.</p> <p>VII. An Account of some of the principal Sea Fish, their Nature, Qualities, and the Manner of catching them, &amp;c.</p> <p>VIII. Particulars respecting the Laws and Customs of Angling.</p> |
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The Whole carefully collected from actual Experience,  
**BY THOMAS SHIRLEY.**



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P R E F A C E.

**T**HOUGH much has been said by many writers concerning the antiquity of angling, in which they have introduced a great deal of fable, I shall content myself with mentioning only two authorities, such as cannot be disputed. It is certain, that angling is much more ancient than the incarnation of our Saviour; for, in the prophet Amos, mention is made of fish-hooks, which must imply anglers in those times.

No diversion is, perhaps, better calculated to raise the mind, to calm and compose the troubled passions of the soul, and to promote health, content and ease, than that of angling. While the great lawyer is swallowed up in business, and the statesman is preventing or contriving plots, the angler is, perhaps, sitting on a bank enamelled with cowslips, listening to the enchanting voices of the little feathered songsters, while the silver stream at his feet with pleasing murmurs glides gently along.

Hunting, as well as many other dangerous diversions, may have its charms to allure some people to the pursuit of it; but it cannot be so natural as that

of angling. The one is all noise and tumult, the other peace and serenity. The angler leisurely surveys the wonderful works of the creation, and adores that Being, from whom he receives all his pleasures. His retirement and solitude are physic for his soul, and delivers it from the hurry and various passions in which other pursuits are too much involved. As exercise is its necessary companion, and a pure and clear air one of its constant attendants, health always follows in its train.

In short, the various objects that continually offer themselves, as subjects for the angler's contemplation, inspire the mind with that innocent cheerfulness, ease and tranquillity, which is hardly to be experienced from any other diversion, and never to be found amidst noise and tumult.

With respect to this little work now offered to the perusal of the angler, I have only to observe, that it is collected, partly from the actual experience of many years, and partly from the informations of the most expert anglers, compared with the productions of the most eminent writers on this subject.

THOMAS SHIRLEY.

*Richmond, Surry.*

C O N.

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THE  
ANGLER'S MUSEUM.

CHAP. I.

*The Nature and Properties of Fish in general.*

**W**HEN we consider what numberless sorts of fishes have hitherto escaped human curiosity, what a variety are already known, and the amazing fecundity of which they are possessed, we are almost led to wonder, how the rivers and ocean find room for its inhabitants. A single fish is said to be capable of producing eight or ten millions of its kind in a season. Nature has, however, removed every inconvenience, which might arise from this amazing increase, by making the subsistence of one species depend on the destruction of another. The same enmities that subsist among land animals prevail with equal fury in the waters, and with this aggravation, that by land the rapacious kind seldom devour each other; but, in the rivers and ocean, it seems an uni-

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versal

versal warfare, fish against fish : the large devour the small, even of their own species ; and those that escape, in their turn, become the tyrants of such as are smaller than themselves.

As fishes are pressed by unceasing hunger, we may reasonably imagine, that they lead a life of continued hostility, violence, and evasion. It is natural to suppose, that the small fry stand no chance in this unequal combat : their usual method, therefore, of escaping, is by swimming into shallows, where the great ones are afraid, or unable to pursue them.

The pursuit of fishes is not, like that of terrestrial animals, confined to a single region : shoals of one species follow those of another through vast tracts of the ocean, from the vicinity of the pole, even down to the equator. Thus the cod, from the banks of Newfoundland, pursues the whiting, which flies before it, even to the southern shores of Spain.

The shape of most fish is much alike ; for they taper a little at the head, and by that means are able to traverse the fluid they inhabit with greater ease. The tail is extremely flexible, and is furnished with great strength and agility, bending itself either to the right or the left, by which means it repels the water behind it, and advances the head and all the rest of the body. It is commonly thought, that the fins are the chief instruments of motion ; but this is a vulgar error, the chief use of the fins being to poise the body, and to keep it steady, as also to stop it when it is in motion. Borelli, by cutting off the belly fins of a fish, found that it reeled to and fro, and was unable to keep itself in an upright posture. When a fish would turn to the left, it moves the fins on the right side, when to the right, it plays those on the left ; but the tail is the grand instrument of progressive motion.

Most



Most of their bodies are clothed and guarded with horny scales, suitable to the dangers they are exposed to, and the business they are to perform: these scales we find moistened with a slimy liquor, and under them lies, all over the body, an oily substance, which, by its antipathy to water, supplies the fish with warmth and vigour.

Fish are enabled to rise or sink in the water by means of a bladder of air that is included in their bodies: when this is contracted, they sink to the bottom; but when it is dilated, they rise to the top. That this is the true use of this bladder appears from an experiment made upon a carp. This creature was put into an air pump, and when the air was pumped out of the vessel, that which was in the bladder of the fish expanded itself to such a degree, that the carp swelled in an extraordinary manner, and his eyes started out of his head, till at last the bladder burst in his body. The fish did not die, but was thrown immediately into the water, where he continued to live a month longer: however, he never rose any more, but crawled along the bottom like a serpent.

The gills serve this animal for respiration, and are a kind of lungs, which he opens for the reception of the air: their mechanism is so contrived, as to admit this element without any mixture of water. Through these passages the air evidently flows into the bladder, and then the fish ascends: but in order to sink, he is obliged to contract this bag; the air then rises to the gills, and is ejected, and the fish descends with a rapidity proportionable to the quantity of ejected air. Air is necessary to preserve the lives of fish; for by what means soever the air is excluded from the water, it soon proves fatal to the fish that are contained therein.

A great number of fish are furnished with teeth, which are not designed for eating or chewing, but to retain their prey. These teeth are differently placed, according to the different manner of this animal's feeding; in some they are placed in the jaws, palate, and tongue; in others in their throat; these last are called *leather-mouthed fish*.

The eyes of these animals are flat, which is most suitable to the element in which they live, for a protuberant eye would have hindered their motion in so dense a medium; or by brushing through it, their eyes would have been apt to wear, to the prejudice of their sight.

All fish have a peculiar season to deposit their spawn. They in general chuse the hottest months in summer, and prefer such waters as are somewhat tepid by the rays of the sun. They then leave the deepest parts of the ocean, which are always most cold, approach the coasts, or swim up the rivers of fresh water, which are warm by being shallow. When they have deposited their burthens, they then return to their old stations, and leave their spawn, when come to maturity, to shift for themselves. These at first escape by their minuteness and agility. They rise and sink much sooner than grown fish, and can swim in much shallower water: But with all these advantages, scarce one in a thousand survives the various dangers that surround it; the very male and female that have given it life are equally dangerous and formidable with the rest, for every fish is the declared enemy of all it is able to devour.

There are some fish which produce large eggs, after the manner of birds; with the yolk and white, that are hatched in their bodies before they are excluded; and this is proper to the cartilaginous kind.

Others are oviparous, or bring forth a great quantity of spawn; which being a kind of little eggs, are hatched in the summer time by the warmth of the water. The increase of these is almost incredible; for Lewenhoeck has computed, that there are no less than nine millions three hundred and forty-four thousand eggs in a single cod. Hence it ceases to be a wonder, that every species is preserved, notwithstanding they are continually preying upon, and devouring each other. The flat-fish, in particular, conceal themselves in the mud, which they resemble in colour, till the spawning of other fish is over, and then they seize upon the eggs, and feed upon them. If it were not for this practice, and the devouring of the fry, the ocean itself would not be large enough to contain the prodigious number of fish that would otherwise come to maturity.

Most fish are provided with a tongue, and some, as the carp, have none at all, but in its stead they have a fleshy palate, which is accounted a delicious morsel among persons who are fond of such niceties. What use a tongue is of to fish is not easy to determine, since it cannot serve to modulate their voice, because they are entirely mute; nor does it serve to revolve the food in their mouths, for it is immovable; neither can it assist them in mastication, for they swallow every thing without chewing; not yet is it likely to be the organ of taste, because it is gristly in all fish, except those of the cetaceous kind, and therefore does not seem adapted to perform an office of so exquisite a nature, unless in an obscure manner, which perhaps may be sufficient for their purpose.

Some fish have no throat, their maw or stomach being placed next to their mouths; but such whose

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bodies are long and slender, as the eel kind, have a throat, though they are without lungs.

Though the stomach of fish is endowed with no sensible heat, yet it has a wonderful faculty of digestion, since in those of the more voracious kind, it not only dissolves great numbers of other fish, but even prawns, crabs, and lobsters, which are covered with hard crusty shells.

Many writers on fish have affirmed, that none, except those of the cetaceous kind, have either kidneys or urinary bladder; but this proves a mistake, for it is hard to say whether there are any without them or not; however, it is certain that most are provided with them, and, as Dr. Needham observes, those whose swimming bladder is double, or divided into two lobes, have larger kidneys than the rest.

Besides these they are endowed with a liver, spleen, and pancreas, in the same manner as quadrupeds, and which probably serve for the same uses.

The sea carries off from the lands which it washes, a vitriol and bitumen, that disperse and incorporate with the smallest particles of the water. It is in this nauseous water, that the all-wise Creator has thought fit to improve and bring to perfection the flesh of those fish which the most voluptuous prefer before the choicest fowls. In this element one would imagine, that the number or fertility of the inhabitants should not be any thing considerable; yet what a prodigious quantity of mussels, crabs, lobsters, and other fish of an enormous size; what piles of oysters, whose whiteness and fat give a keenness to the appetite; what a profusion of turbot, flounders, dabs, burts, plaice, and all the various species of flat fish, whose flesh is so exceedingly admired, does it furnish us with! We observe, in the season, whole fleets of ships freighted with herrings; and

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and at other times, shoals of mackarel and whittings present themselves voluntarily before us upon the coasts; insomuch that many cities are supplied with a sufficient quantity of them by the bare capture of a single day. Legions of smelts and flounders forsake the salt waters in the spring, and begin to swim up the rivers. Shads follow the same track, and grow to their full perfection in the fresh water. Salmon continue till August, to enrich the fishers, and regale the public. Every season furnishes us with fresh delicacies, without the least interruption of their usual presents; such as lampreys, smelts, soles, thornbacks, and a vast variety of other fish, that adorn our dishes, and gratify the nicest taste. What a delicacy, what a profusion of provisions do we receive from the indulgence of this element!

This very delicacy, however, might possibly so enhance their value, that none but the rich could purchase them; or the plenty might be so great, that the corruption of the whole, or the greatest part, might prevent their timely consumption. But both these inconveniencies are effectually prevented by a little salt. Thus the sea is lavish of her stores, and at the same time furnishes us with that which renders their communication easy, and their conveyance safe. We observe likewise in this profusion of the sea, a precaution which enhances the value of her gifts, and proves an additional blessing. Such fish as are wholesome food, and agreeable to the taste, are exceedingly prolific; but those, on the other hand, whose flesh is unpalatable, or prejudicial to our health, and whose monstrous size renders them formidable to others, for the generality bring forth their young completely formed into the world, and seldom more than one or two at a birth. The same wisdom that has regulated with such indulgence the bounds



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of their fecundity, keeps those at a wide distance from our shores, which we have the least occasion for, and puts others into our possession, which are of most benefit and advantage to us. Some species are with us all the year long, and others pay us an annual visit in prodigious multitudes. The exact time of their passage, and their peculiar track, is well known, which are very advantageous circumstances, though sometimes it may vary ten or fifteen days, by means of strong winds or bad weather. We may form an adequate idea of other fish of passage from the herrings and cods. The former seem to have their principal rendezvous between the points of Scotland, Norway, and Denmark. From thence the Danish colonists take their annual progress, and, at different seasons, cross the channel: their voyage is performed with the utmost exactness, their track is prescribed, and their march regulated. The whole body move at once; not one of them presumes to straggle, pillage, or desert. When the body of their army is once passed, not one of the same species appears again till the year ensuing. An infinite number of worms and little fish are bred every summer in the channel, with which the herrings regale themselves. They are a sort of manna, which these animals never fail of picking up; and when they have cleared the seas in the northern parts of Europe, they descend towards the south, to which they are attracted by the pleasing prospect of a new stock of provisions.

We have but very few cod-fish in our seas. Their general rendezvous is at the immense bank before Newfoundland. There they are so numerous, that the fishermen, who resort thither from all parts, are constantly employed, and find their labours attended with surprising success. One man shall sometimes catch

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catch three or four hundred in a day. When the sustenance that attracts them is exhausted in these parts, they disperse, and proclaim open war with the whittings, which are their favourite aliment. The latter fly before them; and their frequent returns upon our coasts are principally owing to this hostile chace.

Having mentioned the wars of the cods and whittings, I must take notice of one circumstance, which reigns through all the species of fish.

The mussel opens her shells, and when a small unwary crab presumes to creep in, she claps them close together in an instant, and secures her prey. The oyster takes the same measures to ensnare such little fish as are not on their guard. The sole, and most flat-fish, lie concealed likewise in the soil, to the colour whereof their backs bear a near resemblance, and observe, with the utmost circumspection, where the females of large fish sink commodious lodgments for their spawn. The sole springs instantaneously from her ambuscade, and regales herself with this delicious food, which pampers her up, and gives her an exquisite flavour. The small soles, in their turn, are equally an agreeable collation to the large crabs; and when we open one of these latter, we seldom fail of finding a sole or two in the belly of it.

But though the inhabitants of the watery regions are thus addicted to devour one another, the Almighty has taken proper measures for the preservation of fish, by giving strength to some, activity and circumspection to others, in order to save their species from entire destruction.

## C H A P. II.

*Rules and Cautions to be observed by young Anglers.*

**I**F at any time you happen to be over heated with walking, or other exercise, avoid small liquors, especially water, as you would poison; but rather take a glass of rum or brandy, the instantaneous effects whereof, in cooling the body, and quenching drought, are amazing.

Patience is one of the first requisites for a fisherman; as it frequently happens that he must exercise this virtue a whole day, without having any sport.

During all the winter months, and in March, the beginning of April, and September, if the sun shine, the air be clear, and there be no wind, fish bite best in the middle of the day.

From the middle of April to the end of August, the best hours to angle, in fine weather and clear water, are from sun-rise till ten o'clock, and from three till sun-set. In cloudy weather, with any wind except the easterly, you may catch fish all day. In a muddy stream you may likewise angle at all hours, from April to August, though mornings and evenings are the properest times. Fish in general bite best in rapid, stony, and gravelly rivers; and better in summer than in winter. Fish bite well when they come into sandy foids to rub themselves, a little before they spawn.

Anglers must be careful to keep out of the sight of the fish, by standing far from the bank: but muddy water renders this caution unnecessary. — Fish only in waters that are common, except you obtain

obtain permission of the owner. It is proper to angle at ground, when the filth washed down by rain from the higher grounds is carried away by floods, and the river appears of a brown, chesnut, or ale-colour. You may angle a ground with a fly, after, or during a moderate shower.

After dark, cloudy, windy nights, or when the moon shines but little, you must not expect much sport the following day, except for small fish; for then trout and other large fish range in search of prey. Angling is pursued with most success from the beginning of May, to the beginning of September. Writers on this subject have directed that anglers should wear dark coloured cloaths, as the more glaring colours are apt to fright the fish.

Fish sometimes bite well at the conflux of rivers, and where the tide ebbs and flows, but usually in the ebb. The south-west, the west, and the south winds, are most favourable to anglers.

To induce fish to come where you wish to angle, throw in boiled corn, worms, &c. and to keep them to the place, throw in grains of ground malt; but for salmon and trout, a composition of ground malt, blood, and clay, is the best.

When you have hooked a fish, never suffer him to run out with the line; but keep your rod bent, and as nearly perpendicular as you can: by this method the top plies to every pull he makes, and you prevent the straining of your line, for the same reason.

Never raise a large fish out of the water by taking the hair to which your hook is fastened, or indeed any part of the line, into your hand; but either put a landing-net under him, or, for want of that, your hat; you may, in fly-fishing, lay hold of your line

to draw a fish to you; but this must be done with caution.

Your silk for whipping hooks, and other fine work, must be very small; use it double, and wax it; and, indeed, any other kind of binding, with shoemaker's wax, which, of all wax, is the toughest, and holds best: if your wax be too stiff, temper it with tallow.

Enclose the knots and joints of your lines in a small pill of wax, pressed very close, and the superfluities pinched off: this will soon harden, and prevent the knots from drawing.

If, for strong fishing, you use grass, which, when you can get it fine, is to be preferred to gut, remember always to soak it about an hour in water before you use it: this will make it tough, and prevent its kinking.

Whenever you begin fishing, wet the ends of the joints of your rod; which will prevent their loosening, because it makes them swell: and if you happen, either by rain or otherwise, to wet your rod, so that you cannot pull the joints asunder, turn the ferret a few times round in the flame of a candle, and they will easily separate.

Before you fix the loop of bristle to your hook, in order to make a fly, to prevent its drawing, be sure to singe the ends of it in the flame of a candle: do the same by the hair, to which at any time you may whip a hook.

Make flies in warm weather only; for in cold weather your waxed silk will not draw.

In rainy weather, or when the season for fishing is over, repair whatever damage your tackle has sustained.

Never regard what bunglers and slovens tell you; but believe that neatness in your tackle, and a nice  
and



and curious hand in all your work, especially in fly-making, are absolutely necessary.

The following are deemed proper times for angling. In calm weather. In a brisk south or west breeze; if you can find shelter, no matter how high it be. When in the hottest months it is cool and cloudy. After floods, when the water fines, and is of a whey-colour. After a hasty violent shower has a little muddied and swelled the tide; especially for ground-fishing. When a river is very much swelled, and it runs violent in any still pit, then by its sides: the mouth of any slow creek running into it, and the ends of bridges where the water runs calm and quiet, if not too deep. There is admirable sport when flushes are let down, or mills set going, if you follow the course of the water.

The following are deemed improper times or places for angling. In a strong east or cold north wind. After a long drought. In the middle of days that are excessive hot and bright, especially in muddy, or clear shallow rivers. When there has been a white frost in the morning. In days of high wind. Where they have been long washing sheep. Just after fish have spawned. Upon rising of any sudden clouds that are likely to precede rain. The days following dark, clouded, or windy nights. When rivers, especially small ones, are pent up by flood gates, or mills, and run low.

## C H A P. III.

*The Choice and Preparation of Rods, Lines, &c.*

**T**HE choice of the angler's *Rod* is a matter of no small importance. For fishing at the bottom, whether with a running line or float, the reed or cane rod is, on account of its lightness and elasticity, to be preferred to the hazel, especially if you angle for those fish that bite but tenderly, as the roach and dace. Of these rods, some are put up in the form of a walking-stick. There are others that are composed of many joints, and put up all together in a bag, and are therefore called bag-rods. These last are very useful to travel with, as they take up but little room.

Next to these is the hazel rod; but this is more apt to warp than the cane. These, as well as excellent fly-rods, are to be had at every fishing-tackle shop, and therefore need no particular description. Be careful, however, when you bespeak a rod of reed or cane, that the workman does not rasp down into the bark that grows round the joints. This is a fault, of which rod-makers are too often guilty, and thereby make the rod weaker at the joints than in any other part; for, there being no bark to repel the wet, it soon rots, by which fault you may lose a good fish, and break your rod. It may not, however, be improper to give some directions for making rods, as many anglers live in those parts of the country where they are not always to be bought.

When the sap is gone down into the roots of trees, which is generally between the latter end of

No-

November and Christmas, gather the straightest hazels you can find, in order to use them for stocks. These, at the larger end, must be about an inch, or more, in diameter. At the same time, gather shoots of a less size, for middles and tops. Tie them together in a bundle, and let them lie on a dry floor.

At the end of fifteen months, match them together; and to the slender ends of the tops, after cutting off about eight or ten inches, whip a fine taper piece of whalebone of that length. Then cut the ends of the other pieces with a strong slant, so that they may join exactly to each other, and spread some shoemaker's wax very thin over the slants; after which, bind them neatly with strongly-waxed thread. Lastly, fix a strong loop of horse-hair to the whalebone, and let the rod, so made, lie a week to settle before you use it. In this manner also you may make a fly-rod; but observe, that the latter must be much more slender from the end of the stock than the former.

To make a very neat fly-rod, you must proceed in the following manner. Get a yellow whole deal board, which is free from knots. Cut off about seven feet from the best end, and saw it into square breadths. Let a joiner plain off the angles, and make it perfectly round, a little tapering: this will serve for a stock. Then piece it to a fine straight hazel, of about six feet long, and then a delicate piece of fine-grained yew, plained round like an arrow, and tapering, with whalebone, as before, of about two feet in length. There is no absolutely fixing the length of a fly-rod; but one of fourteen feet is as long as can well be managed. To colour the stock, dip a feather in aqua fortis, and chafe it into the

the deal, which will then become of a cinnamon colour.

Rods for barbel, carp, and other large fish, should be of hazel, and proportionably stronger than those for roach and dace.

The angler's *Line*, whether it be a running line, or for float-fishing, had best be of hair, unless you fish for barbel, and then it must be of strong silk; but remember, that the single hair is to be preferred for roach or dace fishing. The fly-line must be very strong; and, for the greater facility in throwing, should be eighteen or twenty hairs at the top, diminishing gradually to the hook. Lines are sold at the fishing-tackle shops, which have no joints, being woven in one piece. But, notwithstanding this and other improvements, as some may perhaps still choose to make their own lines, we shall endeavour to give some directions for that work.

Your hair must be round and clear, and free from galls or frets; for a well-chosen, even, clear, round hair, of a kind of glass colour, will prove as strong as three that want those perfections. You will seldom find a black hair that is not round, but many white ones are flat and uneven; for which reason, if you get a lock of round, clear, glass-coloured hair, you ought to make much of it.

In making your lines, observe this rule: first let your hair be well washed before you set about twisting it; and then choose not only the clearest hairs for it, but such as are of an equal size; for then they generally stretch all together, which hairs of an unequal size never do, but break singly, and thereby deceive the angler in the strength of his line. When you have twisted your links, lay them in water for a quarter of an hour at least, and then  
twist

twist them over again before you tie them into a line.

Though many prefer twisting hair with the fingers, yet I would recommend a little engine for that purpose, which is sold at all the fishing-tackle shops in London, with proper directions for using it.

When you use the fly, you will find it necessary to continue your line to a greater degree of fineness: in order to which, supposing your line to be ten yards in length, let your upper link consist of nine or twelve hairs, diminishing the number in the succeeding links, till you come to the size of a fine grass, and to the end of this fix your hook-link, which should be either of very fine grass or silk-worm gut. A week's practice will enable a learner to throw out one of these lines; and he may lengthen it, by a yard at a time, at the greater end, till he can throw fifteen yards neatly, till when he is to reckon himself but a novice.

As to the colour of your line, you must be determined by that of the river in which you fish; but I have generally found, that a line of the colour of pepper and salt, which is made by mixing a black hair among the white ones in twisting, will suit any water.

Indian or sea-grass makes excellent hook-links; and though some object to it, as being apt to grow brittle and snap in using, yet, with proper management, it is the best material for the purpose yet known, especially if ordered in the following manner. Take as many as you please of the finest you can get, put them into any vessel, and pour thereon the scummed fat of a pot, wherein fresh (but by no means salt) meat has been boiled. When they have lain three or four hours, take them out one by one, and stripping the grease off with your finger  
and



and thumb, stretch each grass as long as it will yield, coil them up in rings, and lay them by. You will then find them become nearly as small, full as round, and much stronger, than the best single hairs you can get. To preserve them moist, keep them in a piece of bladder well oiled, and, before you use them, let them soak about half an hour in water, or in your walk to the river side, put a length of it into your mouth. If your grass is coarse, it will fall heavily on the water, and scare away the fish, on which account gut has the advantage. After all, if your grass be fine and round, it is the best thing you can use.

Silk must never be mixed with hair lines; and, though silk lines are very apt to rot and break, yet they may serve in some places, where good hair is not easily to be come at. In this case, a good angler will always make the lowest part of such lines of the smallest lute or viol strings.

The next thing to be considered is the *Float*, which, for river fishing, should be of cork; but, for ponds and standing waters, quills will do very well, as also in slow rivers, where you angle near the top with tender baits or paste. Let your cork be the finest, and free from flaws. Bore it through with a small hot iron, and thrust it on to a sizeable quill, after having shaped the former with a penknife to the likeness of a pyramid, egg, or pear, of a proportionable bigness, and finely smoothed on a pumice stone. Run your line through the quill, and wedge it in with the uppermost hard part of the quill, the smaller end of the cork being towards the hook, and the larger towards the rod. Let the cork be so poised with lead on the line, that the quill, standing directly upright, the least bite or nibble may sink the cork.

A cork

A cork float, for one hair, must be no bigger than a pea; for three, as big as a bean; for six, as a small walnut; and for twelve hairs, as big as a French walnut.

Quill floats may be bought every where; and, if it chance to be bruised or split, save the plug, and it will serve another. If the water gets in at the top, cover it with sealing-wax; or, if your plug be loose, take bees-wax bruised small, chalk scraped fine, and powdered black rosin, of each an equal quantity. Melt them in a spoon, and mix them well as they melt, which will be a proper cement to fasten it, by dipping the plug in, and immediately putting it into the float, for it cools as soon as sealing-wax.

In choosing *Hooks*, mind that they are sharp at the point, the beards not broken, of a proper length, and the wire well tempered and firm. A short-thanked hook is esteemed best.

The size of your hook must be regulated by the fish for which you intend to angle. Barbel and chub require large hooks; carp, eels, tench, perch, and bream, a moderately-sized hook; smelts, roach, dace, and gudgeons, require a small one.

The angler who pursues his sport at any distance from home, must be supplied with many articles, such as a rod with a spare top; lines coiled up, and neatly laid in round flat boxes; spare links, single hairs, and waxed thread and silk; plummets of various sizes, floats of all kinds, and spare caps; worm-bags, and a gentle-box; hooks of all sizes, and some whipped to single hairs; shot, shoemaker's wax, in a very small gallipot covered with a bit of leather; a clearing-ring, a landing-net, a sharp knife, and a pair of scissars. All these things, however, may be contained in a wicker panier of about twelve inches

inches wide, and eight high. But let us proceed to examine some of the angler's materials more particularly.

The *Plummet*, which is used in order to try the depth of the water, in which you intend to angle, should be made of sheet lead, that, by opening it, you may at any time the more easily fit it on the hook without any fear of losing it.

The *Landing net* must be deep, with a round iron rim at top, made to fasten to the end of a long stick, in order to land such fish as are too heavy for your tackling. At the other end of the stick should be a large hook, which you may thrust into the mouths of salmons, and such other fish as are too bulky for your net, and by that means bring them safe to shore.

The *Clearing-ring* is used to disengage your hook, when it has caught hold of a weed, &c. It must be thick and heavy, but not wider than the round part of your hook, and is thus to be used. Take off the thick joints of your rod, and slip the ring over the remaining small ones, and, holding a cord fastened to the ring, let it fall gently. This, as soon as it reaches the hook, will disengage it, by the assistance of your gently pulling the cord.

The *Gorger* is a small piece of cane, of five inches long, and a quarter of an inch wide, with a notch at each end. With this, when a fish has gorged your hook, you may, by putting it down his throat till you feel the hook, and holding the line tight while you press it down, easily disengage it.

## C H A P. IV.

*Of Float-Fishing, and of live and dead Baits.*

**W**ITH respect to *Float-fishing*, there are some rules, with which the young angler ought to be acquainted. Let the rod be light and stiff, and so smart in the spring, as to strike at the tip of the whale-bone. From fourteen to fifteen feet is a good length for the rod.

In places where you sometimes meet with barbel, the line should be six or seven hairs at top; then diminishing gradually for two yards, let the rest be strong Indian grass, to within about half a yard of the hook, which may be whipped to a fine grass, or silk-worm gut. This line will kill a fish of six pounds weight.

For mere roach and dace fishing, accustom yourself to a single hair, with which an artist may kill a fish of a pound and a half weight.

For your float, in slow streams, a neat round goose quill is proper; but for deep or rapid rivers, or in an eddy, the cork, shaped like a pear, is indisputably the best, which should not, in general, exceed the size of a nutmeg. Let not the quill, which you put through it, be more than half an inch above and below the cork; and this float, though some prefer a swan's quill, has great advantage over a bare quill; for the quill, being defended from the water by the cork, does not soften. Besides, the cork enables you to lead your line so heavily, that the hook sinks almost as soon as you put it into the water; whereas, when you lead but lightly,

ly, it does not go to the bottom till it is near the end of your swim. In leading your lines, be careful to balance them so nicely, that a very small touch will sink them. Some use, for this purpose, lead shaped like a barley-corn; but there is nothing better to lead with than shot, which you must have ready cleft always with you, remembering, that when you fish fine, it is better to have on your line a great number of small than a few large shot.

In fishing with a float, your line should be about a foot shorter than your rod; for, if it be longer, you cannot so well command your hook when you come to disengage the fish.

Having thus given some necessary rules for float-fishing, I shall now proceed to a particular description of *Baits* in general for that purpose.

*Worm-fishing* comes in about the middle of February, if the weather be mild, and continue good till the latter end of May. You may fish with a worm at any time of the day, if the water be muddied or disturbed with rain; but if the water be low and fine, only mornings and evenings, in the most rapid streams. Your lead should be about nine inches or a foot from your hook, your hook armed with a bristle upon the shank, to prevent the worm slipping down into the bend of the hook: the worm is a very natural bait to fish with, being frequently washed into rivers and brooks by land floods, and generally take the largest fish.

The best worms for this fishing, are the *Dunghill Red Worm* and the *Brandling*, well scoured in moss, or fennel. The former to be found under old thatch, or thatch and dung mixed together, though there are some to be found in moist dunghills. The brandling is a very beautiful worm, streaked from head to tail in round ringlets, one streak red and the other



other yellow; chiefly to be fished with when the water is low and fine, by the sides of rapid streams. They are to be found in dunghills where horse dung and hog's dung are mixed together; but the largest and finest are found among the shavings of currier's leather mixed with a little earth. These are the only two sorts of worms worth the angler's notice with a running line.

*Minnow-Fishing* comes in about the middle of March, and continues till the latter end of August. It is a most excellent bait, very destructive, of strong exercise, being always in motion, and affords the angler variety of sport. It is to be fished with at any time of the day from sun-rise till sun-set, and takes the best and largest of fish. By its quick turning motion, if fished with as it ought to be, it provokes the fish to come, if not upon their feed. Your line for this purpose must be strong and fine, with one or two swivels upon your line, to help your minnow to play and turn freely, and easily, so as to prevent your line from twisting and breaking; your hook large, not loaded upon the shank, but a cap that runs upon the line and falls upon the head of the pink, which I find answers better than the leaded hook, and the minnow spins more freely and easily: besides, by the help of the cap, may be confined, one, two, or three hooks to hang loose by the side of the minnow that is baited upon the great hook; so that when the fish strikes at the minnow, they are oftener taken by the small hooks than by the large one. This way of fishing is chiefly to be used in rapid streams, which helps to give the minnow a brisk motion, by drawing your line pretty briskly against the stream, and when you see the fish run at it, take care not to snatch away the bait through surprise, which the unexperienced angler is not

not sufficiently guarded against. In the months of May and June, they are to be taken in standing waters, as well as in streams, and there cannot be said too much in praise of this most excellent bait.

*Cod-bait* fishing comes in about a fortnight in May, and continues till about the middle of June. It is a very killing bait, and will take almost every sort of fish, in deep standing waters as well as in streams, mornings and evenings, till the middle of June. Your line for this purpose must be strong and fine, at least two yards of fine gut or grass; the hook, leaded upon the flank, and the cod-bait drawn upon the lead. The way of using it is by moving it up and down about a foot or nine inches from the bottom; which, in angling, is called sink and draw, by which motion the fish take it in very eagerly either rising or falling. There is another advantage in this way of fishing, by reason you may fish in rivers or brooks incumbered with bushes, near to stubs or roots in the water, in bubbles, curls or streams, and other places in the water that cannot be fished any other way, where generally the largest fish lie. These cod-baits, or cadis, are to be found in gravelly and stony brooks, or rivulets, under great stones, in small husks composed of gravel and sand. You will observe, that the ripest, and those fittest for use, stick to the stones. When you have got as many as you want to use, put them into a linen bag, tie them up, and keep them five or six days, dipping the bag once a day in water, which makes them yellow, tough, and fit for use. This bait is made artificially, and takes as well as the natural, being not easily distinguished the one from the other, in the water.

*Maggot* fishing comes in about the beginning of May, and continues till the latter end of February in the

the next year ; it being the best and most killing ground-bait that ever was made use of. It will take every sort of fish that swims in fresh water, except salmon, pike, or shad ; though I have taken small pike with a maggot, but that is very uncommon. From the beginning of May to the latter end of June, trouts take the maggot very freely : from that time till the latter end of August they decline in their biting, there being not so many to be taken as in the two former months. About the beginning of August, greyling-fishing comes in, and continues good till the latter end of February ; though there are some few greyling to be taken all the summer months, but the prime months are September, October, and November ; being then in high season, and greater quantities to be taken than in any other months in the year. Maggots are the best baits for quickness of sport, and taking the greatest quantity of fish that ever could be thought of, in rivers, brooks, and ponds ; for by throwing in a few hand-fulls of them, about half an hour or an hour before you begin to fish, you will draw the fish together, they feeding on them undisturbed, have not the least suspicion of being taken, or decoyed. In such places, so baited, you may always depend on having diversion ; your tackle suited for that purpose, according to the foulness or clearness of the water you fish in. The bottom of your line should be about two yards of fine gut, or single hair, with a swan or goose-quill float upon your line ; always observing that your shot drags on the bottom, especially in a stream ; making it a rule to fish the deeps in clear water, and the shallows when muddy. There are a great many baits and pastes to take fish, but the maggots must have the preference of all ground-baits.

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Mag-

Maggots are thus bred and preserved all the winter. Get a beef's liver, lights, lungs, or a sheep's head, but livers are the best. After it is scored with a knife, hang it up and cover it, but not too close; for the flies will blow it better covered than hanging in the open air. In two or three days after you perceive the maggots to be alive, take down the liver, and put it into a barrel, box, or large earthen pot, and there let it remain till you think the maggots are of full growth; then take a sufficient quantity of bran, in proportion to the largeness of the liver, and throw it into them, and in three or four days the first brood of them will come out of the liver into the bran, and there scour themselves. Then, in three or four days more, take a stick and run through the liver, and hang it across the barrel or pot, when the latter brood will soon drop out into the bran, and scour themselves fit for use. If you are willing to preserve maggots all the winter, you must get two or three livers about the beginning of November, and, if it be a favourable season, the flies will blow stronger than in the hotter months of the year, in order to preserve their kind against the next summer. These are to be managed in the same manner as the other, only kept somewhat warmer till they come to their full growth, and then throw in a good quantity of bran, which will preserve them from the frost in the winter, keeping them in a cellar, or some dampish place, in the barrel or box they were bred in. Thus you may keep them till the latter end of February, and use them any time at your pleasure.

*Grass-hopper* fishing comes in about the latter end of June, and continues till the latter end of August. It is a curious fine bait, very natural to fish, but  
very

very tender; to be drawn upon a leaded hook, after the same manner as the cod-bait, and will take almost all sorts of fish, as pike, trout, greyling, perch, chub, roach, dace, &c. Your tackle must be fine, the same as for the cod-bait; and to be fished with after the same manner, and the same places in rivers and brooks. He is to be made artificially upon a leaded hook, which takes as well as the natural, but best when the water is low and fine, either natural or artificial. The young grass-hoppers, about the latter end of May, are to be found in the knots, or joints of most sorts of herbs and grass in the fields, in a white fermented froth, called cuckoo's spit, where they are nourished for some time, and then drop into the grass, and in about three weeks time arrive at their full growth and perfection, and so continue till the severity of the weather destroys them, leaving their eggs in the grass to preserve their species till the next year.

*Cabbage-worm*, or *Cabbage-grub* fishing, comes in about the middle of June, and continues in their successive flights till the latter end of October. There are three sorts which the fish are remarkably fond of. They are to be fished with after the same manner as the cod-bait or grass-hopper; the tackle the same, only this difference, the hook must be leaded upon the shank, and the bait drawn upon the lead with a bristle, whipped upon the shank, to confine the bait upon the lead. They are equal in goodness to the cod-bait, or grass-hopper, and will take the same sorts of fish. These three sorts are to be made artificially. To be fished with after the same manner, with equal success as the natural ones.

The *White Butterfly* is produced from the speckled cabbage-grub.



The *Brown Butterfly* is produced from the brown cabbage-grub, or sleeper, to be found only in the hearts of cabbages.

The *Dun Butterfly* is produced from the green cabbage-grub.

I cannot quit this subject of float-fishing, without saying something of the use and preparation of *Pastes*, which are of various sorts.

Old cheese and turpentine, and a bit of fat rusty bacon, compose an excellent bait for the chub in winter.

Take some of the finest flour, drop a little milk or water upon it, and work it well in the palm of your hand till almost dry. Then temper it with a small quantity of the finest honey, make it into a round ball, and keep it in a moist linen cloth, or it will grow dry and hard. If you would have it yellow, mix turmeric with it; if a flesh colour, vermilion, and knead it well.

Take some old Cheshire cheese, the crumb of a French roll, and some sheep's kidney-suet; beat them in a mortar into a paste, adding as much clarified honey as will soften it. This is excellent for a chub.

Take shrimps and prawns, pull off the shells and skins, and beat the clear meat in a mortar, with a little honey, till it come to a paste. With this cover the point of the hook.

Grate fine bread in a little water, in which gum-ivy has been soaked, and you will find it a good bait for roach and dace.

For carp or tench, you may mix crumbs of bread with honey, and you will often find it answer your wish.

With respect to the use of pastes, observe these general rules. Proportion the quantity of paste you  
put

put upon your hook to the size of the fish for which you angle. Pastes must not be angled with in rapid streams; but on small hooks, in pits, ponds, lakes, or slow-running rivers.

A handful or two of the best wheat, boiled in a little milk till soft, and fined leisurely with honey, and a little beaten saffron dissolved in milk, is a good bait for roach, dace, chub, or greyling.

To this chapter of Ground-Angling properly belong the following kinds of sports.

*Ledger-bait angling* is when the bait always rests in one fixed and certain place. To perform this, the line must be leaded as usual, with a bullet with a hole through, large enough to let the line easily draw through; and about nine inches above the hook, fix a shot to prevent the bullet slipping down to the bait, and the float taken off. Within half a yard of the top of the line must be wrapped a thin plate of lead, about an inch and a half long, and an inch broad: this will serve to discover by its motion when you have a bite. You may either hold the rod firmly in your hands, or stick the thick end of it into the side of a bank.

*Running-line angling* is with one or two small pellets of lead to your line without a float. The lead should be just so much as will sink the bait to the bottom, and let the stream carry it down without much stopping or jogging. It is necessary to begin at the head of the stream, and let the bait drive downward as far as the rod and line will permit. It is good frequently to raise your bait a little from the ground, and let it drop gradually again. The line must be kept as strait as is consistent with letting the lead drag on the ground, and when there is a bite it will easily be felt, as well as seen by the point of the rod and line. When the fish bites, the

line should be slackened a little, that he may more easily swallow the bait, and then you should strike gently and directly upwards. When your lead is rubbed bright, you ought to cover it thinly with shoemaker's wax, or change it. When you angle thus for trout in small brooks, you frequently find very good holds grown over with wood; in such case, wrap your line about your rod till it comes to the hook, and then you will easily get the top of your rod under any bough; this done, loose as much line as will reach the bottom, by turning your rod the contrary way; keep the end of your rod as high as you can till you have line enough unwrapt, then suddenly let it drop into the upper part of the hole, and if you have a bite, let him have liberty to gorge, and by this method you will frequently take good trout that you would not otherwise have come at.

*Snap-angling* is with two large hooks tied back to back, and one smaller to fix your bait on. Your tackle must be very strong, and your line not quite so long as your rod, with a large cork-float, leaded enough to make it swim upright. Your bait must not be above four inches long. As soon as ever you perceive the cork to be drawn under water, strike very strongly, without giving the fish time, otherwise he will throw the bait out of his mouth. When you find he is hooked, master him as soon as you can, and with your landing-net under him get him out of the water. Some prefer a double-spring hook, and put the bait on by thrusting the wire into the middle of its side, and through its mouth, sewing up the mouth afterwards.

*Top-angling* with a worm requires a line without float or lead. The bait must be drawn up and down the stream on the top of the water. This method should

should only be used when the weather is fine, and the water clear. It is sometimes successful in fishing for trout and salmon-smelts.

*Trimmer-angling* is very useful in a meer, canal, or pond, and even in the still part of a river. This requires a round cork, six inches in diameter, with a groove on which to wind up your line, except so much of it next the hook as will allow the bait to hang about mid-water, and likewise so much of the other end as will reach to the bank, or a bush, where it is to be fastened. In this position you may leave it to take its chance, while you are angling elsewhere. As soon as the pike takes the bait, and runs away with it, the line unwinds itself off the trimmer, without giving him the least check. However, when you come to take up your line, give it a jerk, as in other fishing, and then your prey will be more secure. This is a good method of fishing in the night.

*Trowling* is a method of angling chiefly used to catch a pike. This requires strong tackle, and no very slender top, with a ring fixed to it for the line to run through. When you perceive a pike lying in wait for his prey, put three or four rings, one bigger than another, made in this form, Co, upon a gudgeon-rod; and then put your trowling-line through the loops of the rings, and you will soon have sport. The best baits are roach, dace, or bleak, newly taken, if the water is any thing thick, or the day cloudy; and nothing is comparable to a large gudgeon, in a clear day and stream. Great baits invite him most, but little ones are most sure to take him. Your line must be of silk, at least two yards next the hook, and thirty yards long; there must likewise be a reel to wind it upon. The hook must be leaded, that the head of the fish may hang  
C 4 down-

downward; there must be likewise two links of wire fastened to it. And because it is not very easy to thrust the wire through the body of the fish, it will be proper to have a fish-needle, which passing through first, the wire will readily follow it. Let the point of your hook stand near the eye of your bait, and then sew up its mouth to keep it firm. The fin of the tail should be cut off, and the tail itself fastened to the top of the wire, otherwise the bait will not lie smooth and even upon the hook. It will be likewise proper to fasten the bait at the gills, with the help of a needle and thread: this done, make a loop at the end of your line, and fasten a swivel to it, then put it through the loop of your ring, and hang your bait on the swivel. When you throw your bait into the water, take care to avoid stumps and weeds, for they will do your bait as much damage as the bite of a pike. Give your bait time to sink; then slowly raise it, by degrees, higher and higher, till you see your bait; then let it sink again; and so on, drawing it gently towards you. If a pike take the bait at first, it is across its mouth, for he seldom or never swallows it until he gets to his harbour: therefore, as soon as you perceive you have a bite, if he go down the stream with your bait, it is commonly a small fish; if up, you may expect a large one; but take care not to check him until he has had time to pouch the bait.

*Trotling* in ponds is performed with a long line, which will reach from one side of it to the other. It should have as many armed hooks and baits, about three yards asunder, as the length of the line will allow. This method requires an assistant, who must hold one end of it, and help you to keep it in a gentle motion, until you find you have a bite, and then strike with a jerk the contrary way to the motion of the fish.

C H A P.



## C H A P. V.

*Of Fly-Fishing, and the Preparation of artificial Flies.*

**F**LY-fishing, or fishing at the top of the water, is the most genteel, ingenious, pleasant, and profitable of the innocent recreation of angling; to the perfect accomplishment of which is required, not only great attention and frequent practice, but also diligent observation and considerable judgment. It is the cleanest and neatest that can possibly be imagined, being quite free from the trouble of baiting your hook, or fouling your fingers. The exercise it requires you to take is moderate and gentle, not being confined long to any part of the river, but moving from stream to stream. The fish that are caught in this manner are of the best and most delicate sorts; and when the water is in order, and plenty of flies, there are a great number of fishes to be taken. The preparation of the materials for the artificial fly, and the skill and contrivance in making them, and comparing them with the natural, is a very pleasing amusement. The manner of the fishes taking them, which is by rising to the surface of the water, and sometimes out of it, gives the angler a very agreeable surprise, and the length of line greatly adds to the pleasure of tiring and killing them after they are hooked.

I shall now proceed to a description of those flies that are most useful for every month in the year, in their proper seasons, that those who please may make them; and such as desire not to become so compleat artists as to make their own flies, may nevertheless

know, by the help of this little book, not only which are the best flies for their purpose, but how to bespeak them of others, to be not more deceived in the exactness of the flies than in the right use of them.

The *Red Fly* comes down about the middle of February, and continues till the latter end of March. He is made artificially of a dark drake's feather; the body of the red part of a squirrel's fur, with the red hackle of a cock wrapt twice or thrice under the butt of the wing; has four wings, and generally flutters upon the surface of the water, which tempts the fish, and makes them take him the more eager.

The *Blue Dun Fly* comes down the beginning of March, and continues till the middle of April. His wings are made of a feather out of the starling's wing, or the blue feathers that grow under the wing of a duck-widgeon. The body is made with the blue fur of a fox, or the blue part of a squirrel's fur, mixed with a little yellow mohair, and a fine blue cock's hackle wrapt over the body in imitation of the legs. As he swims down the water, his wings stand upright on his back; his tail forked, and of the same colour of his wings. He appears on the water about ten o'clock in the forenoon, and continues till about three in the afternoon; but the principal time of the day is from twelve till two; the flies then come down in great quantities, and are always more plentiful in dark, cold, gloomy days, than in bright sunshine weather. Your morning's fishing, till the flies come on, should be with the worm or minnow.

The *Brown Fly*, or *Dun Drake*, comes down about the middle of March, and continues till the latter end of April. His wings are made of the feather of a pheasant's wing, which is full of fine shade,

shade, and exactly resembles the wing of the fly. The body is made of the bright part of hare's fur, mixed with a little of the red part of squirrel's fur, ribbed with yellow silk, and a partridge's hackle wrapt twice or thrice under the butt of the wing. As he swims down the water, his wings stand upon his back; his tail is forked, the colour of his wings. He comes upon the water about eleven o'clock, and continues till two, appearing upon the water in shoals or great quantities. In dark gloomy days, at the approach of the least gleam of sun, it is amazing to see, in a moment's time, the surface of the water almost covered over with ten thousands of these pretty little flying insects, and the fish rising and sporting at them, insomuch that you would think the whole river was alive: a pleasing sight to the angler, and affords him great diversion. In this manner they appear upon the water every successive day till the end of their duration. The blue dun, and the brown, are both on at the same time; the blues are most plentiful in cold and dark days, and the browns in warm and gloomy days, though I have often seen blues, browns, and grannams, on at the same time, when they have refused the other two sorts, and have taken the browns only. There cannot be too much said in commendation of this fly, both for his duration, and the sport he affords the angler.

The *Craddung Fly* comes down about the middle of March, and continues till the latter end of April. When upon the water, his wings lie flat upon his back. He is to be used in cold stormy days; is seldom seen upon the water but when driven there by high winds. His wings are made of a feather out of the wing of a landrail; his body is of a dirty lemon-coloured mohair, with a hackle of the

same colour, wrapt under the butt of the wings, and to be made somewhat in resemblance of the large horse ant.

The *Stone Fly* comes down about the middle of April, and continues till the latter end of May. He is a large four-winged fly, bred from an insect in the water, called the water cricket, and is to be found in stony, gravelly brooks or rivers. His belly is of a dirty yellow, his wings of a fine blue colour, full of small veins, so that he is best made with a fine blue grizzle cock's hackle; the body with dark brown mohair, mixed with a dirty yellow. He is to be fished with at any time of the day, but does best in small brooks, or in the most rapid streams in rivers.

The *Granam Fly*, or *Green Tail*, comes about the beginning of April, if the weather be warm, being a very tender fly, and cannot endure the cold. When they first appear upon the water, they come in great quantities, in bright mornings. You may begin to fish from six o'clock in the morning till eleven, when you will find the browns come on, which you must use, as you will find they will not touch the granams as long as the browns continue. About five o'clock in the evening, you may use the granams again with success, the browns then having totally disappeared for that day. This granam fly is a four-winged fly; as he swims down the water, his wings lie flat upon his back; has a small bunch of eggs of a green colour, which gives him the name of the green tail fly; for as soon as he lights upon the water, he drops his eggs. It is of short duration, not lasting above a week, and then totally disappears for that year. His wings are made of a feather out of the wing of a partridge, or pheasant, which is shaded like the wing of the fly; his body

is made of the fur of the hare's face, or ear, and a grizzled hackle of a cock wrapt under the butt of the wing.

The *Spider Fly* comes about the twentieth of April, if the weather be warm, and continues about a fortnight. They are bred in beds of gravel by the water side, where you may find them in bunches engendering, in order for their production the next season. In cold and stormy days, they hide themselves in the gravel, not being able to endure the cold. You may fish with him from sun-rise till sun-set, being a very killing fly, therefore cannot say too much in praise of him. His wings are made of a woodcock's feather, out of the butt of the wing; the body of a lead-coloured silk, with a black cock's hackle wrapt twice or thrice under the butt of the wings. This fly cannot be made too fine.

The *Black Gnat* comes about the same time as the spider fly, and continues till the latter end of May. To be fished with in cold stormy days, and is seldom to be seen in warm weather. His wings are made of a dark blue hackle, and the body of an ostrich's feather.

The *Black Caterpillar* comes about the beginning of May, and continues about a fortnight, and is to be fished with after hot sunshine mornings. If winds and clouds appear, they then grow weak for loss of the sun, and fall upon the waters in great quantities. His wings are made of the feather out of a jay's wing, the body of an ostrich's feather, which I think far preferable to the plover's, with a fine black cock's hackle over the body. He is a very killing fly in small rivers and brooks.

The *Little Iron-blue Fly* comes about a week in May, and continues till the middle of June. In cold and stormy days, they come down the waters in great



great quantities, but in warm days there are few to be seen. As he swims down the water, his wings stand upright upon his back; his tail is forked, the colour of his wings. He is a neat curious little fly, and cannot be made too fine. To be fished with from about eleven o'clock in the forenoon till three in the afternoon. When these flies are on, the fish refuse every other sort, and take these only; every sort of fish being fond of them. His wings are made of a cormorant's feather that grows under the wing, or the feather of a dark blue hen that grows on the body under the wings, the body of water-rats fur, ribbed with yellow silk, with a sooty blue hackle of a cock wrapt over the body.

The *Yellow Sally Fly* comes about the twentieth of May, and continues till about the tenth or twelfth of June. He is a four-winged fly. As he swims down the water, his wings lie flat on his back. His wings are made with a yellow cock's hackle, his body is made with yellow dubbing only. He is one of the flies that prepare the fish to look for the May fly, or green drake.

The *Canon*, or *Down-hill Fly*, comes about the sixteenth of May, and continues about a week in June. It is to be found on the butts of trees, with his head always downwards, which gives him the name of the down-hill fly. He is bred in the oak-apples, and is the best of all flies for bobbing at the bush, in the natural way, and a good fly for the long line, when made artificially. His wings are made with a feather out of the wing of a partridge, his body with a bittern's feather, the head with a little of the brown part of hare's fur.

The *Shorn Fly* comes about the same time as the canon fly, and continues till the latter end of July. They are for the most part found in mowing grafs.

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He is of the caterpillar kind, has husky wings of a dark brown colour, with fine clear blue wings under them, which he makes use of in his flight. He is in his greatest perfection in June; and, for the time of his continuance upon the water, is as killing a fly as any I know of in rivers or brooks. There are three sorts of them; the one I have before mentioned, as to his colour; there is another with a dull red wing; and the third with a dark blue wing: all which sorts the fish take very well; but the preference must be given to the red sort. To be fished with any time of the day, from sun-rise to sun-set. His wings are made of a red cock's hackle, with a black list up the middle, the body with a peacock's harle.

The *May Fly*, or *Yellow Cadron*, comes down the twentieth of May, is of short duration, not lasting above nine or ten days. He is a large and beautiful fly, which both fish and birds are very fond of. They are most plentiful in gravelly, sandy, stoney rivers or brooks; but in some dead, heavy, dull waters, there are a few to be seen. As he swims down the water, his wings stand upright on his back; he has a three-forked tail, about an inch long. He is to be fished with from about ten o'clock in the morning till sun-setting; being a fly the fish are remarkably fond of, they not only take them very eagerly at the top of the water, but feed on them as they rise from the bottom, where they are bred in husks, which they quit when they come to the surface of the water, and are so short lived, that they are almost instantly devoured by fish or birds. It is an excellent fly for bobbing at the bush, as well as the long line, and is as killing upon standing waters as in streams. When these flies are on in perfection, the fish refuse all other sorts, and take these only.

only. His wings are made of the feather of a grey drake, or rather the grey feathers of a wild mallard, died yellow; the body is made of the yellow wool of a ram or wether; his body is ribbed with a dark brown, for which no feather does so well as the hackle of a bittern; it likewise makes the legs very artificially; his head is of a dark brown, made of a peacock's harle, and his tail with the hair of a fit-chew's tail.

The *Grey Drake* comes about the twenty-seventh or twenty-eighth of May. He is a large and beautiful fly, in shape and make very much resembles the yellow cadow; seldom appearing on the water till about six or seven o'clock in the evening, and to be fished with from that time till sun-setting. All the former part of the day, the fish take the yellow cadow very freely; but in the evenings, when the grey ones appear in great quantities, they will not touch the yellow ones. In fishing with this fly, you must endeavour to imitate the rising and falling of him on the water, being always in motion, frisking up and down, for which reason, in some places, he is called tilt-up fly. He is not a difficult fly to make, but more difficult to fish with after he is made; and therefore, if possible, cast your line so that your fly may drop directly over the fish's head, which resembles the manner of these flies dropping on the water; which method must be observed in fishing with these flies upon standing waters, as well as streams: but all other flies ought to be thrown about half a yard above the head of the fish, as they all swim gradually down the water. There are three sorts of grey cadows, and but only one of these sorts to be made artificially; the other two sorts seldom appearing upon the water, but are generally playing and frisking by the sides of hedges near the water side,

side, and are much darker and smaller than those that frequent the water, therefore are not worth the angler's notice. The wings of this fly are made with a grey feather of the wild mallard, the widegeon being too dark; the body, of goat's hair, which makes it the best of any thing I know of, the silver twist being too heavy, and too glaring in the water; the legs of a dark grizzle cock's hackle, which I find far preferable to the bittern's hackle; the head of a dark brown, made of a peacock's harle; his tail is three-forked, about an inch and a half long, which is made of the hairs or wicks out of the tail of a fitchew.

The following ingenious account of this fly is very justly described by a gentleman, a very accurate observer of nature's productions; as it may be matter of curiosity and entertainment to some of my readers, I shall here give it them as briefly, and as near his own words, as I can.

I happened to walk by the river side, at that season of the year, when the May flies, the grey sort, which are a species of the libella, come up out of the water, where they lie in their husks for a considerable time, at the bottom or sides of the river, near the likeness of the nymph of the small common libella; but when it is mature it splits open its case, and then, with great agility, up springs the new little animal, with a slender body, four blackish-veined transparent wings, with four black spots upon the upper wings, and the under wings much smaller than the upper ones, with three long hairs in its tail; the husks, which are left behind, float innumerable upon the water. It seemed to be a species of the ephemeron, and I imagined it was the same insect described by Goodart and Swammerdam, but a few days convinced me of the contrary; for I found  
them

them to be of longer duration than theirs. The first business of this creature, after he is disengaged from the water, is flying about, to find out a proper place to fix on, as trees, bushes, &c. to wait for another surprising change, which is effected in two or three days. The first hint I received of this wonderful operation was, seeing their exuviae hanging on a hedge; I then collected a great many, and put them in boxes, and by strictly observing them, I could tell when they were ready to put off their clothes, though but so lately put on. I had the pleasure to shew my friends one that I held on my finger, during the time it performed this great work. It was surprising to see, how easily the back part of the fly split open and produced the new birth, which I could not perceive to partake of any thing from its parent, but leaves head, body, wings, legs, and even its three-haired tail behind on the case. After it has reposed itself a while, it flies with great briskness to seek its mate. In the new fly a remarkable difference is seen in their sexes, which I could not so easily perceive in their first state, the male and female being then much of a size, but now the male was much the smallest, and the hairs in his tale much the longest. I was very careful to see if I could find them engendering; but all that I could discover was, that the males separated and kept under the cover of the trees, remote from the river. Hither the females resorted, and mixed with them in their flights, great numbers together, with a very brisk motion of darting or striking at one another when they met, with great vigour, just as house flies will do in a sunny room. This they continued to do for many hours; and this seemed to be their way of coition, which must be quick and soon performed, as they are of so short duration. When the females  
were



were impregnated, they left the company of the males, and sought the river, and kept constantly playing up and down on the water. It was very plainly seen, every time they darted down they ejected a cluster of eggs, which seemed a pale bluish speck, like a small drop of milk, as they descended on the water; then, by the help of their tail, they spring up again, and descend again, and thus continue till they have exhausted their stock of eggs, and spent their strength, being so weak that they can rise no more, but fall a prey to the fish; but by much the greatest numbers perish on the waters, which are covered with them. This is the end of the females; but the males never resort to the rivers, as I could perceive; but, after they have done their office, drop down, languish, and die under the trees and bushes. I observed, that the females were most numerous, which was very necessary, considering the many enemies they have during the short time of their appearance; for both birds and fish are very fond of them, and no doubt under the water they are a food for small aquatic insects. What is farther remarkable in this surprising creature is, that in a life of a few days, it eats nothing, seems to have no apparatus for that purpose, but brings up with it out of the water sufficient support to enable it to shed its skin, and perform the principal end of life with great vivacity. The particular time when I observed them very numerous and sportive, was on the 26th of May, at six o'clock in the evening. It was a sight very surprising and entertaining, to see the rivers teeming with innumerable pretty nimble flying insects, and almost every thing near covered with them. When I looked up into the air, it was full of them as high as I could discern; and being so thick, and always in motion, they made almost such

such an appearance as when one looks up and sees the snow coming down; and yet this wonderful appearance, in three or four days after the last of May, totally disappeared.

The *Orl Fly* comes down the latter end of May, and continues till the latter end of June. He is a four-winged fly, generally flutters along the surface of the water, and is a fly the fish are remarkably fond of. You may fish with him with success after the May fly is gone, from four o'clock in the morning till about seven in the evening, at which time the sky blue comes on; then they leave off the orl, and take the sky blue only. The wings of the orl fly are made with a dark grizzle cock's hackle, the body, of a peacock's harle, worked with dark red silk.

The *Sky-coloured Blue* comes about the same time as the orl fly, and continues till the middle of July. It is a neat, curious and beautiful fly; his wings stand upright on his back, and are of a fine transparent blue colour; his body of a pale yellow, with a forked tail, the colour of his wing. It is a fly the fish take extremely well from seven o'clock in the evening till sun-set. His wings are made with a light blue feather of a hen; the body is made with a pale yellow mohair, mixed with a light blue fur, ribbed with a fine cock's hackle, died yellow.

The *Cadis Fly* comes about the tenth of June. It is a large four-winged fly, of a buff colour; his body the same colour of his wings. He continues on the water till about the beginning of July; he is bred from the cod-bait, a curious little creature. While in the state of a grub, he is greatly to be admired, the outside husk he lives in being curiously wrought with gravel or sand. This fly does best at the clearing of the water; though I think him a fly worth the least notice of any in the catalogue, there  
being

being many sorts on at the same time far preferable to him. His wings are made of a feather taken from the body of a buff-coloured hen; the body is made of buff-coloured mohair, with a pale yellow hackle for the legs.

The *Fern Fly* comes about the middle of June, and continues till about the middle of July. He is a four-winged fly; his body very slender, and of an orange colour. He is to be fished with at any time of the day, from sun-rise till sun-set, being a very killing fly. His wings are made with a woodcock's feather, his body with orange-coloured silk.

The *Red Spinners* come about the middle of June, and continue till the latter end of August; to be fished with only in the evenings after very hot days, from seven o'clock as long as you can see. There are two sorts of Spinners: the one is made with the grey feather of a drake, tinged with a copper-coloured gloss; his body with the red part of the squirrel's fur, ribbed with gold twist, and a fine red cock's hackle for the legs; with a long forked tail, made with the hardes of a red hackle. The wings of the other Spinner is made with a feather out of the wing of a starling; the body of a dull red mohair, ribbed with gold twist, with a fine red cock's hackle over the body, the tail long and forked, and made as the former. These are both very killing flies, particularly upon rivers.

The *Blue Gnat* comes down about the same time as the spinner, and continues about a fortnight. If the water be low and fine, the fish take them very well, as long as they last upon the water. The wings of this Gnat are made with a small pale blue cock's hackle, the body with a light blue fur, mixed with a little yellow mohair.

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The *Large Red Ant Fly* comes about the middle of June, if it be hot and sultry weather, and continues till about the fifteenth or sixteenth of July, appearing mostly in hot, close, gloomy days. To be fished with from about eleven o'clock in the forenoon till about six in the evening; then make use of the evening flies, as described before. The Ant Flies, when in perfection, are amazingly killing; and all sorts of fish that rise at flies are very fond of them. You may take fish with them in dead heavy waters, as well as in streams. The wings of this fly are made with a feather out of the wing of a starling, the body of a peacock's harle, made pretty large at the tail, and fine towards the wing, with a fine ginger-coloured cock's hackle wrapt twice or thrice under the butt of the wing.

The *Large Black Ant Fly* comes at the same time with the red, and to be fished with at the same time, and after the same manner. The wings of this fly are made with the lightest sky-coloured blue feather you can get, and with the greatest gloss; but it is difficult to find any that can come up to the glossiness of the natural wing, except the thistle, which makes it the best of any thing I know of, but is not lasting. The body is made with a black ostrich's feather, with a black cock's hackle, wrapt under the butt of the wing, and to be made in the same form as the red one.

The *Welshman's Button*, or *Hazel Fly*, comes about the latter end of July, and continues about nine or ten days; is in form like a round button, from which he derives his name: he has four wings, the uppermost husky and hard, the undermost of a fine blue colour, soft and transparent; to be found upon hazle trees, or fern bushes. He is an excellent fly for bobbing at the bush, or long line, being rather difficult

difficult to make, upon account of his shape and form; his wings are made with the red feather that grows upon the rump or tail of a partridge; the body is made with a peacock's harle and an ostridge's feather mixed, with a fine black cock's hackle for the legs.

The *Little Red and Black Ant Flies* come about the tenth or twelfth of August, and are to be seen in warm gloomy days till the latter end of September; to be fished with from about twelve o'clock till four in the evening; to be made in the same form as the large ones, and with the same materials, but very small.

The *Little Whirling Blue* comes down about the tenth or twelfth of August, and continues about three weeks. As he swims down the water, his wings stand upright on his back, and has a forked tail the colour of his wings. To be fished with from eleven o'clock in the forenoon till three in the afternoon. His wings are made with the feather out of the wing of a starling; his body is made with squirrel's fur, mixed with a little yellow, with a fine red hackle over the body.

The *Little Pale Blue* comes down about the same time as the whirling blue, and continues till the latter end of September. As he swims down the water, his wings stand upright on his back; has a forked tail the colour of his wings. It is a neat, curious, little fly, which the greyings are very fond of. To be fished with from about ten o'clock in the morning till three in the afternoon, and generally affords the angler great diversion. His wings are made of the feather of a sea-swallow, the body is made of the lightest blue fur you can get, mixed with a very little yellow mohair, with a fine pale blue hackle over the body.

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The *Willow Fly* comes about the beginning of September, and continues till the latter end of October. He is a four-winged fly, and generally flutters upon the surface of the water. To be fished with in cold stormy days, being then most plentiful upon the water; but in warm gloomy days make use of the pale blue. His wings are made of a blue grizzled cock's hackle; the body, of the blue part of squirrel's fur, mixed with a little yellow mohair. The three last-mentioned flies carry out the season for fly-fishing.

From the middle of May till August you will find great variety of flies and gnats upon the water every day, so that you must observe it as a general rule, to fish with the first fly that comes on in the morning, for that fly which is first mentioned in every month, is the first fly that comes down in the day, and to be fished with first; and then you will see the other flies and gnats coming down every day in their regular succession, one after another, every succeeding day till August. The great number of flies and insects that are upon the water all the hot summer months, and the great variety of food they have both at top and bottom, makes them very nice, and more difficult to take than in the spring, or in the autumn; the great number of flies and insects that are upon the water all the summer months totally disappear about the middle of August, so that your diversion is more certain with the three autumn flies, which are equal in goodness to the three spring flies, which are the red fly, the blue dun, and the brown. In these two seasons of the year, if the weather be favourable, and the water in order, you will find your sport more certain and regular than in the hotter months. Some are of opinion, that the flies differ according to the rivers; but I will venture to say, they

they are all alike in their kinds, and are produced at the same certain times and seasons of the year, only this difference, they might alter a shade or two in their colours, arising from the nature of the soil through which the rivers run. Now I have given you an account of all the most useful flies, and their seasons, except the two salmon flies, two night flies, and the palmers, which I shall describe in their order.

The *Dragon Fly* comes about the middle of June, and continues till the latter end of August. His head is almost all eyes, has four wings full of small veins, very clear and transparent, tinged of a copper colour; his body of various colours, and about two inches and a half in length, and feeds upon small insects in the air, after the same manner as swallows do upon flies.

The *King's Fisher*, or *Peacock Fly*, comes about the same time as the dragon fly, and continues about a week longer; feeds on the same insects, and after the same manner. He is called the king's fisher from the beautifulness of his colour; but the peacock fly I think the most proper name, being so near the colour of the feathers that grow upon the neck of the peacock, as this fly's wings and body are. It is needless to treat of any more salmon flies; for salmon flies, in general, are made just as the painter pleases, Salmon being fond of any thing that is gaudy, and they will rise at almost any of the trout flies, where salmon are plenty. Now I shall give you an account of the two night flies.

The *Brown* and *White Night Flies* are a couple of moths, which come about the beginning of June, and continue till the middle of July; seldom to be seen at any time but in the night, and to be fished with in a dark gloomy night, after a bright sun-

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shine day, from eleven o'clock at night till break of day with success: but if it be a moon-shine, or star-light night, there are no fish to be taken. Your line for this method of fishing must be about a yard longer than your rod, putting two or three maggots, or a worm, at the point of your hook, for the smelling part, and you may hear them rise in as much perfection as if you were fishing by day, and will take them in standing waters as well as in streams. The brown one is made of the feather of a brown owl, the body of a light mohair, with a dark grizzle cock's hackle for the legs. The white one's wings are made of a feather out of the wing of a white owl; the body, of white cotton, and the white hackle of a cock for the legs.

The *Palmer Worms* are to be made artificially, and to be used upon the surface of the water, after the same manner as the artificial fly.

The body of the *Golden Palmer* is made of orange-coloured silk, ribbed down with a peacock's harle and gold twist, with the red hackle of a cock wrapt over the body.

The body of the *Brown Palmer* is made with hog's down, died of an amber colour, ribbed with silver and gold twist, with a red cock's hackle wrapt over the body.

The body of the *Black Palmer* is made with black ostrich's feather, ribbed with silver twist, with a black cock's hackle over the body.

The body of the *Red Palmer* is made with a dark reddish-coloured mohair, ribbed with gold twist, with a blood-red cock's hackle over the body.

Having now laid down, in the best manner I can, an account of the most useful flies, in their several seasons, that are requisite for the diversion of my brother anglers, with the proper materials for making

each fly, it will be necessary, before I conclude the subject of fly-fishing, to lay down the best directions I can for making the artificial fly.

When you make an artificial fly, you must, in the first place, make choice of a hook of a size proportionable to the fly you intend to make, which must be whipped on to your gut or hair, in the same manner you would whip on a worm-hook, only with this difference, that instead of fastening near the bend of the hook, you must fasten your silk near the top of the shank, and let your silk remain; then taking as much feather as is necessary for the wings, lay it as even as you can upon the upper side of the shank with the butt end of the feather downwards towards the bend of the hook, and tie it fast three or four times with the silk, and fasten it; then, with a needle or pin, divide the wings as equally as you can; then take your silk and cross it three or four times between the wings, bringing the silk still downwards towards the bend of the hook; then taking your hackle feather, tie it fast at the bend with the point of the hackle upwards; next, your fur or dubbing being ready, which is to make the body of the fly, take a little of it and twist it gently round your silk, and work it upwards to the butt of the wings, and there fasten it; then take your hackle and rib it neatly over your dubbing, and fasten it; then bending the wings, and putting them into the form you design, bring on the butt end of your hackle towards the head, and there fasten it firm; then taking a bit of dubbing or fur, as near to the colour of the head of the fly as you can, whip it twice or thrice round with your silk, and then fasten just above the wings; so your fly is completed.

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I confess, no directions can well be given for making a fly, the way of doing it sometimes varying, according to the sort of fly you are to make, or to the fancy of the artist; yet these rules, with a little practice, will, in some measure, assist an ingenious angler; but to see a fly made by a skilful hand is the best manner of learning. It is also very necessary to take notice as you walk by the river, of the particular sort of fly that the trouts leap at, then catching one of them, and having a bag of materials ready provided for that purpose, try how far art can imitate nature; and though you miss at first, yet by diligent observation and experience, you may soon arrive at perfection, and take a particular pleasure in fly-making.

The art of managing your rod, and throwing your fly, is no more to be learned by rules than that of making it; only I would advise the young sportsman never to incumber himself with too much line, not longer than the breadth of the river he fishes in. In raising your line, observe to wave your rod a little round your head, rather than bring it directly backwards, and take care not to make a return of your line till it is gone to its full length behind you, otherwise you will be very apt to whip off your fly. The greatest skill is to make your line fall as light as possible on the water, especially in smooth gliding streams; for if it falls heavy, so as to dash the water, you will be sure to affright, and not to catch, the fish. When you see a fish rise at a natural fly, the best way is to throw about half a yard above, rather than directly over, his head, and let your fly move gently towards him, by which means you will shew it him more naturally, and he will be the more tempted to take it: but nothing but your own experience and practice can make you master in the art,



art, so as to throw in difficult places, between trees and bushes, and into holes and curls of the water, where, generally, the best and largest fish lie, not easily to be come at by unexperienced anglers.

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## CHAP. VI.

*Account of the different Sorts of Fish, their Havnts and spawning Time, and the best Baits, Times and Seasons, to angle for them.*

**T**HE SALMON is accounted the king of fresh-water fish, and always breeds in rivers that have an immediate communication with the sea; but so high or distant from it, as not to admit of any salt or brackish tincture; yet they spend much of their time in the salt water, making the sea generally their winter quarters, perhaps for warmth as much as for any thing else. It is the largest of fresh-water fish, and therefore, as well as for the superexcellency of his nature, is called the king of fresh-water fish. It is a fish of prey, and has teeth in his mouth as other fish of prey have; and when in season, he is adorned with a row of small round black spots along the middle of each side, from head to tail. Salmon are of several sorts, and different appellations; but for a nice taste, Thames salmon are reckoned to exceed those of any other river. The Severn salmon are excellent in their kind, and are first in season of any river in England.

Salmon frequent large rivers most, such as empty themselves into the sea; not only at the entrance of those rivers, where they lose themselves in the sea, but many miles up them, where the current is most swift and violent, and whose bottoms are most stony, rocky, pebbly, gravelly and weedy, and come into them in February, March, April and May, sometimes sooner, and sometimes later in the year, where he fattens, the sea adding greatly to his growth and goodness. He is ever restless, coveting to get near the spring head, and frequently wanders into lesser rivers that fall into larger, especially in spawning time, *i. e.* in September and October, where, in shallow places of those smaller rivers, the female hath cast her spawn, and the milt done his natural office, by shedding his milk upon it, they cover all with gravel and sand.

When Salmon have spawned, they grow out of season, weak and flaggy, break out in filthy scabs all over their bodies, loathsome to sight, and very unwholesome to feed on. In this condition, after spawning, they return to sea before Christmas following, if they are not taken, or stopped by flood-gates, weirs and mills, and so confined to the fresh water; in which case they become lean, consume, and die within a year or two.

The principal occasion of their dying is this: the salmon being a fish by nature tender, and very chill, cannot, in the winter season, endure the extreme frigidity of the fresh river water, by reason of its tenuity, especially being so lately weakened by spawning; and therefore, by natural instinct, they make the sea their winter habitation, the sea-water being naturally warm. Eels being a like tender fish by nature, and most sensible of cold, lay themselves up in mud all the winter for warmth, as not being then

then able to endure the sharp coldness of the fresh water, and perhaps by the like instinct hasten to the sea too, which they do as soon as there comes a flood to carry them off.

The salmon spawn so buried as aforesaid, in a short time becometh a fry of little fishes, which in March and April following appear, and many of them are taken in the same rivers where they were spawned, about four or five inches long, and are then called sewins, samlets, or salmon-smelts, &c. and about that time of the year they go to the sea in shoals the first flood that comes to carry them away. In July and August next they come back into the same rivers, by which time they become a foot or fourteen inches long, and are then called by other names, according to the proprieties of speech of the different places where they are, as salmon-peals, salmon-trouts, salmon-morts. About the beginning of December they go to sea again, and return not into the fresh waters till April or May next, by which time they become two feet or twenty inches long. Then in December after, these return to sea again, and come into the fresh rivers compleat salmon, in February, March, April and May following, to cool, delight, and refresh themselves in the fresh waters, loosen their bellies, and prepare them for spawning, being then about two years and six months old; but how long salmon will live is uncertain.

Now salmon being found in our fresh rivers in the several precedent gradations, and descriptions gradual, hath caused some to think they are several sorts of fish; but I conceive them to be all one and the same species, not coming to be compleat salmon under two years and a half's growth; and the ground of my conception is, I could never find any spawn in any of the lesser sizes, before they come to be

salmon, which they most certainly would have had if of a different kind.

And whereas some affirm, that those small salmon called schedders, are bred of the spawn of the sick salmon that cannot get out of fresh rivers to sea, and for that cause never grow bigger than they are when so called. I take it to be an error, because those sick salmon spawn, when in perfect health only, before the time of their going to sea, and spawn no more after whilst they live, unless they return first to sea, and are purged and cleansed by the salt water after spawning, but are taken, or pine away and die in their imprisonment, either by excessive cold, or for want of such purgation, or both; and the purging of the salt water may as well be a reason why salmon grow so fast, as the want thereof, the cause why they pine away and die so soon when imprisoned in fresh rivers. Salmon being fish of prey, and great feeders, nature directs them to the salt waters as physic, to purge and cleanse them, not only from their impurities after spawning, but from all their muddy terrene particles and gross humours, acquired by their extraordinary and excessive feeding all the summer in fresh rivers, and to harden their fat and flesh, which makes them not only grow the faster, but also become the more wholesome food, savory and grateful to mankind; for the sea admitting no mud, slime, or filth, worketh out gross superfluities, by its cleansing, digesting, attenuating, consuming, astringent, and drying qualities, for in it dryness is predominant, as in fresh water moisture is: but how fish that naturally breed and live in the salt water become fresh fish, for ought I know, can be no more found out than the cause of the ebbing and flowing of the sea.

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Yet for all such purgations we find, that at the first coming back of salmon from the sea into fresh rivers, they are not then in right season, nor till, by the more subtil quality and tenuity of the fresh water, they are also cleared of the grosser particles of the salt water, and thereby become the more rarified, purer and wholesomer for food, according to their superexcellent nature participating both of the fresh and salt water, which other fish do not in like manner, for which reason I suppose the salmon is preferred before all fishes.

That salmon are naturally fresh-water fish, appears, not only by their being spawned in fresh rivers, and their long continuance in them, but also having wind-bladders or swimmers, as other fresh-water fish have, to bear up their bodies floating, poise and keep them equiponderant in the water, which, without such airy vessels, by reason of the tenuity of the fresh water, would sink to the bottom, and lie grovelling, as by breaking the bladder has been experimentally found. By the contraction and dilation of this bladder, they are able to raise or sink themselves at pleasure, and continue at what depth of water they list: but sea-fish have no such vessels, because their bodies are naturally borne up by the thicker, grosser body of the sea-water. This is the most perfect account of the names, nature, season, and spawning-time of this royal fish.

The little gravel last-springs, or samlets, which are often taken to be salmon-fry, are a species of themselves; the rivers Severn and Wye abound with them in great plenty. They spawn about the latter end of August or beginning of September. It is a very nice fish to eat, and affords the angler much sport.



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Salmons take little fish best at their first coming into the fresh rivers : *i. e.* in February and March, all the day long, and likewise flies and worms till the latter end of September. They are to be taken with almost any of the trout's baits. They commonly lie in the middle of the rough, and upper part of a gentle stream, when on prey. Their best feeding time is from six till nine in the forenoon, and from three in the afternoon till sun-set, in a clear water, when the wind blows moderately against the stream. The two best months in the year to angle for them are March and September, particularly with a fly; or you might troll for them, after the same manner you do for a pike. When struck, he begins to plunge and leap; for which reason, when you angle for him any way, use a reel with about forty or fifty yards of line to run off, otherwise he will break your tackle or his hold; for the length of line kills the fish, and affords the angler excellent diversion.

The TROUT is of a longish make, and resembles a salmon more than any other fish. His head is short and roundish, his nose blunt, his body thick, and his tail broad; his mouth is wide, and he has teeth not only in his jaws but in his palate and tongue.

Trout generally delight in the cooler and smaller rivers, which descend from hills and rocky mountains, and they seem to take a pleasure in striving against the stream. It is really wonderful to see with what force and agility they will surmount all difficulties in travelling towards the source of rivers, let their descent be ever so rapid. And several authors tell us, that they are found among the Alps, in waters so very cold, that no other fish can live therein.

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Their time of spawning is in November or December, when they dig holes in gravelly or stony places, and deposit their spawn therein: but they are not in season when they are full of spawn, for they are fattest, and have the most delicious taste, in the months of July and August. However, they begin to be in season in March, and are sooner so in some rivers than in others; particularly in the Wandle they are more forward than in any other about London, and there is near a month difference between that and Hertford river. What the reason should be is hard to guess: but we may conclude, that that river more than commonly abounds with the cadis bait, for there are variety of small fish in the other rivers for them to feed on; whereas, in that part of the Wandle frequented by the trout, there are none but eels, flounders and prickle-backs.

At Latimer, in Bucks, the seat of the Right Honourable Lord George Cavendish, he is supposed to have a ton weight in the river which runs through his park. In 1776 he ordered his servants to draw some parts of the river now stopped by weirs, which make beautiful cascades; they drew out about five hundred brace, which on an average were supposed to weigh one pound apiece, for some of them weighed two pounds.

In the winter time trouts are sick, lean, and unwholesome, breeding a kind of worm with a large head, which is not unlike a clove in shape; then this fish seems to have a head of a larger size than ordinary, and those beautiful spots disappear, and the lively colour of the belly becomes dusky and disagreeable: but towards the latter end of March, when the sun with its genial warmth and influence begins to invigorate the earth, he then makes a shew of some spirit, and rousing, as it were, from a sort of

lethargy, forsakes the deep still waters for the more rapid streams, where he rubs off his inbred foes against the gravelly bottoms, and soon after recovers his former strength and vigour. The flesh is a little drier, and not quite so tender as that of a salmon; however, it is esteemed the most agreeable of all fish that make their constant abode in fresh water.

There are several kinds of this fish, which are all valuable, but the best are the red and yellow trout; and of these the female is preferable, which is known by a less head and a deeper body.

The Fordich trout, which is so much talked of, seems to be of a different sort from the rest, because it is almost as big as a salmon, and lives nine months in the sea; besides, it is seldom or never caught with the angle, being supposed not to feed at all in fresh water: and there seems to be a probable ground for this opinion, for when they are opened there is nothing found in their maw; yet their return to the river is so very constant and punctual, that the fishermen know almost to a day when to expect them. When this fish is in full season the flesh of it cuts white.

The usual baits for a trout are the worm, minnow and fly, either natural or artificial. The proper worms are the brandling, two upon a hook, lob-worm, earth-worm, dung-worm, and maggot, but especially the two first; and, indeed, in fishing at the bottom, the lob-worm is preferable, nor is any other often used.

This fish, as before observed, delights in the swiftest streams; at a stream-tail in spring, and latter end of summer; in May he keeps the upper end; and on the shallows in summer, or at the aprons or tails of mills. He is particularly fond of a hole covered with boughs, and where the roots shoot  
down

down to the water's edge, where he can find a good hold; in such a place you may find the largest, and consequently you must angle for them near such places. When they watch for their prey, they generally shelter themselves under a bank, or a large stone, or in the weeds, where they are often seen lurking entirely covered all but their heads. When they are discovered in this situation, go a little up the stream, and with great care and caution muddy the water, putting in your bait immediately in the very place troubled; then keeping yourself as far from the bank as you can, in order to be out of sight, follow your float, and expect success; some say, much better without a float.

Trout may be taken in this manner either with a minnow or two well-scoured lob-worms. When you use two worms, put the first on the hook with the head foremost, and then slipping it a little up the line to make room, put on the other with the tail foremost, after which draw the first down to it so close, that they may seem to be knotting or engendering; for they often perform this naturally on the banks of rivers, and sometimes fall into the water, where they become a prey to the hungry fish.

This is likewise a good bait when you angle in the morning-twilight, or in the dusk of evening, or even in the night when it is dark. In this case you must put no lead on your line, but throw your bait as gently as you can across the stream, and draw it softly to you on the top of the water. This is the best method of catching the oldest and the largest trout, for they are very fearful and shy in the day-time, but in the night they are bold and undaunted, and generally lie near the top of the water in expectation of meeting with food; for if they see any thing in motion, let it be what it will, they will certainly follow

low it if it glides gently along. If you put the point of your hook in at the head of your first worm and out at the knot, and slip it a little way up the line, that you may bait the other the same, that so both tails may play, you will find it will answer very well.

If you angle for a large trout in muddy water, then it requires some art in baiting your hook; as suppose the bait is a dew-worm, here you must thrust the hook in towards the tail, a little above the middle, and out again below the head; then draw him above the arming of the hook, or whipping, so put the point into the head of the worm, until it is very near the place where the point of the hook first came out, and so draw back the worm, or that part that was above the flank. This hook should be indifferently large.

A water-clearing after a flood, or dark, cloudy, and gloomy weather, when it is windy, is most favourable for worm-fishing. In March, April, September, and a part of October, the warmest sunshiny weather, and middle of the day is best.

It is the practice of some to fish at the bottom in the dark, with a little silver bell fixed to the top of the rod, in such a manner, that when the trout takes the bait, the sound of the bell may give notice of the bite: but some think this method is very precarious, because the least weed that touches your line as it comes down the stream will deceive you. The surest way is to hold your rod in your hand, for as the trout is a bold biter, you will easily perceive when he takes the bait. As soon as you have struck it, give it the butt of your rod; for if you hold it the least upon a level, you run a great risque of losing your line.

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There is a very killing method: make a pair of wings of the feather of a land rail, and point your hook with one or more cadis; your hook should be bristled, and the head of your cadis kept close to your wings, and angle with a rod about five yards, and a line about three. Cast your wings and cadis up the stream, which will drive it down under the water towards the lower part of the hole; then draw it gently up the stream, a little irregularly, shaking your rod, and in a few casts you will be sure to hook him, if there is one in the hole. You may angle the same way with two brandlings.

N. B. If you use two cadis with your wings, run your hook in at the head and out at the neck of the first, and quite through the other from head to tail; this is a killing way for large trout.

When you angle with a fly, let your rod be rush-tapered, with a very slender top, that you may throw your fly with greater certainty and ease; for if the top is too stiff, the fly will be soon whipped off. Your line should be three times the length of your rod.

In this kind of angling, you should place yourself so that the wind may be upon your back, or at least you should chuse such a time or place, that the wind may blow down the stream, and then it will assist you in laying your fly upon the water, before your line touches it; for if your line touch the water first, it will cause a rippling that will fright the fish away.

The cod-bait upon the point of the hook with the artificial fly is recommended. Or another way to angle with the cod-bait is on the water, as with a fly. It must stand on the shank of the hook as the artificial fly; (not come into the bend, or the fish will not value it, nor if you pull the blue gut out,) and

and thus it is a most excellent bait for a trout. Where the river is not violently swift, you may place a very slender lead on the shank, and draw the cod-bait over it; raise it often from the bottom, and so let it sink again: by which means you will find good sport, either in muddy or clear water. You may imitate the cod-bait, making the head of black silk, and the body of yellow wax, or of Shamoy.

When the fish appear at the top, they will take the oak-worm upon the water, rather than under it, or than the fly itself, and it is more desired by them. After you have dibbed with these flies on the surface till they are dead, cut off their wings, and fish with them at mid-water, or a little lower. This is reckoned a valuable secret. You may dib for a trout also with a fly or grasshopper, as you do for a chub, under a bush by the bank side, with a strong rod, and short strong line. If they do not rise after half a dozen trials, there are none there, or they dislike your bait.

You need not be very cautious in the choice of your flies, for a trout is not difficult, nor yet very curious about the season, for some have angled successfully with an artificial May-fly in August.

The time of the trout's biting is from sun-rising till near eleven in the morning, and from two in the afternoon till sun-set; and yet the most certain times, are nine in the morning and three in the afternoon, especially if the wind be at south; for when it blows from that point, it is most favourable to the angler. At this time, if you angle with a loach, about a quarter of a yard deep in the stream, you are sure of catching fish. If you have not this bait, a bull-head, with the gill-fins cut off, may prove a good bait, or a minnow for want of the others.

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And as the trout may be deceived almost by any fly at the top, so he seldom refuses any worm at the bottom, or small fish in the middle; for which reason he is sometimes caught when trowling for jack.

You may likewise dib for trout in the same manner as you do for chub, only let your fly drop as gently into the water as possible, and keep it easily gliding along the surface; let it sink a little, and suddenly raise it again, with a strong rod, and a short strong line: but you must be sure to keep out of sight, for the shadow of your rod, or the flight of a bird over the river, will make them fly almost as swift as the bird, and it will be some minutes, before they will shew themselves again. You will find good sport if you dib with the green drake-fly whilst alive, which is thus practicable. Gather a store of them into a long draw-box, with holes in the cover to give them air, where also they will continue fresh and vigorous a night or more; take them out thence by the wings, and bait them thus upon the hook: first take one, for it is common to fish with two of them at a time, and putting the point of the hook into the thickest part of the body under one of the wings, run it directly through, and out at the other side, leaving him spitted cross upon the hook; and then taking the other, put it on after the same manner, but with its head the contrary way; in which posture they will live upon the hook, and play with their wings for a quarter of an hour or more: but you must have a care to keep their wings dry, both from the water, and also that your fingers be not wet when you take them out to bait them, for then your bait is spoiled.

With the stone-fly you may likewise dib, but with this variation; the green-drake is common both to stream and still, and to all hours of the day; this is  
seldom

feldom dibbed with but in the streams, for in a whistling wind a made fly in the deep is better; but note, morning is the time: but much better towards eight, nine, ten, or eleven o'clock at night; at which time also the best fish rise, and the later the better, provided you can see your fly, and when you cannot, a made fly will murder.

There is a method of taking trout in some parts of England by tickling them. There was a person who was very expert in that art; he would grope for them in their lurking places, and gently tickle their sides, which they seemed to be delighted with, till, at length, approaching their gills, he held them fast, and made them prisoners; and it is observed in the Philosophical Transactions, that carp are sometimes taken the same way.

BULL-TROUT, SALMON-TROUT, SALMON-PEALE, or SCURF, are all different names for the same fish. In some places it grows to the length of twenty inches, in others it seldom exceeds sixteen. It differs in shape from a salmon in not having a forked tail; its head likewise is more short and thick than that of a grey, and its body is adorned with a variety of spots. The flesh of those taken in Yorkshire is not red, as is the salmon, and its taste is more strong and rank than that of the grey.

They are found in Yorkshire, Dorsetshire, and Devonshire, and enter the rivers the beginning of May.

They delight to lie in deep holes, and commonly shelter themselves under the root of a tree. When they watch for their prey, they generally chuse that side of the hole that is towards the stream, that they may more readily catch whatever food the stream brings down.

They

They will rise at an artificial fly like a salmon: but the best bait for them is a well-scoured brandling, especially those that breed in a tanner's yard.

You may angle for them any time in a morning, and in the afternoon from five till night. They are in season all the summer.

When you try to catch them, remember to keep out of sight, and let your line fall into the stream without any lead, except one single shot, and then it will be carried gradually into the hole. When you have a bite, you ought not to strike too eagerly. They bite freely enough, and struggle hard for their lives.

It is worth while to observe, that some give the name of salmon-trout to a young salmon, which has occasioned several to run into errors in treating of this fish. They have likewise in France a kind of pond-trout, which they call a salmon-trout, that grows to such a magnitude as to weigh above thirty pounds; and in the Lemane Lake near Geneva, there are some of this kind, that weigh fifty pounds.

The GREYLING and UMBER are one and the same fish, only different countries give them different names. He is much of the nature of a trout, both as to his food and flesh; calvers like a trout, and eats as firm as a trout, but differs from a trout in taste; and when first taken out of the water smells like violets, and might properly be called the flower of fishes.

The greyling also differs from the trout in his growth, being seldom taken above twenty-four inches in length; and differs in complexion of flesh as well as in outward form; for he is hog-backed, his fins standing upon his back like those of a perch, and his mouth and belly touch the ground togethen; has  
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his teeth in his mouth round the upper jaw as fine as a file. When in season, which is from September till Christmas, he is outwardly black about the head, gills, and along the back; his belly is of a dark grey dappled colour, with beautiful black spots; he is of a delicate shape; he is good and palatable all the year: but his principal season are the months before mentioned.

He spawns about the latter end of March and beginning of April, at which time he lies in sharp streams and brews, and is to be taken with an artificial fly; but you seldom take a spawner; the miller at that time will take a worm freely.

His haunts are the same as those of a trout, and he is usually taken with the same baits and after the same manner; he will take a fly, worm, or maggot, but the last most freely: but is very game some at the fly, being much simpler, and therefore bolder, than a trout; he will rise two or three times at a fly, if you miss taking him. He lurks close all the winter; but about the middle of April he appears brisk and frolicksome, swimming in the middle of the water, making that his politic region, the better to intercept any thing that passes along the river for his nourishment.

His principal baits, that are naturally the produce of the water, are cod-bait, stick-bait, stone-bait, and great variety of smaller insects that gather husks, which are composed of gravel and sand, to preserve them from the coldness of the water; these insects produce flies, which the greyling feed upon both at bottom and top of the water. He is to be taken with a cabbage-grub, grass-hopper, or cod-bait either natural or artificial. This method of fishing is sink and draw, as the hook is leaded upon the flank either for the natural or artificial; and might be used

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in, standing waters as well as bubbles, curls, or streams, being a very killing way, and will take almost every sort of fish. They are to be taken with a fly all the fishing season : but the best months are September, October, and November, if the water be in order for fly-fishing; they are then in high season, and take a fly very freely : but the most certain way, to take them at all seasons, is with gentles or maggots, let the water be muddy or clear. In this method of fishing, your tackle must be made suitable to the condition of the water you fish in, and use a cork or quill float, instead of a running line, letting your shot drag on the ground, throwing in a few maggots now and then for them to feed on. This by experience I know to be the best of all bottom baits for river or pool-fishing; as all kinds of fish take them very freely, except salmon or pike.

The PIKE might be properly called the most voracious animal of the fresh-water element, whose devouring nature has also acquired these other suitable appellations, as fresh-water tyrant, river-wolf, &c. and, indeed, he lords it over every species of his aquatical regiment, not sparing his own kind. A pike of a foot long has been taken forth of another pike's gorge; and it is well known, a pike an ell long will take one half his own length, and swallow it by degrees as it digests; yea, such is his inglorious nature, that whilst his mouth is thus stopp'd up he will offer at another prey; and the better to suit his rapacious quality, his mouth is by nature advantageously formed, opening and shutting like the mouth of a wolf or dog: his lower jaw is much longer than his upper, and in shape more resembling the bill of a goose, and has in his mouth divers sets or rows of venomous teeth, before, on  
both

Both sides, above and below, and so long, sharp, and large, that therewith he can both snap at, and hold fast any thing he encounters : but for all this, the pike is a brave fish, very firm, palatable and wholesome to eat, and affords the angler great variety of sport.

The shape and figure of the pike's body is very long, his back broad, almost square when in his best state, and throughout equal in breadth to his lowest fins ; his head lean and very bony ; his eyes of a golden colour and very quick sighted ; his belly always white, but his back and sides dark and speckled with yellow, if fat ; but the sides of a lean fish are of a greenish cast, his ventricle is large and capacious, his throat short : one spawned in a clear, kindly water, where there is good store of feed, will grow to be eighteen inches long in a year ; during which time, the first year of his age he is called a shottrel, the second year a pickrel, the third a pike, the fourth a luce. Some are of opinion that this fish lives not above fifty years, others will affirm that he will live to an hundred years : but at what age a pike has done growing, is as difficult to prove, as that he lives so long ; though the state of every thing that has life be divided into the time of its growth, its consistence, and its decay, and cannot be long permanent in that state, *i. e.* all things grow up, increase, decrease and perish.

The mighty luce makes the best present, as the more honourable dish at a noble entertainment ; yet a male fish of the size when he becomes a pike, (at which time he is about three quarters of a yard long) more delights the eater, the flesh not being then so coarse, but much more delicious than the overgrown pike or luce.

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The pike is a solitary fish, swims by himself and lives alone; delights most in sandy, clay, or gravelly bottoms, and in deep still pools near to the sides of the rivers; and those that are bred in such waters, grow fatter and faster, and eat better than those bred in pools. River pike delight most in the deepest, largest, and quietest parts of the river, the better to surprize their prey. They lurk among reeds, bull-rushes and water-docks, under boughs of trees, and behind bushes, roots, and stumps of trees, or other things that jut forth into the water; therefore you must fish for them in the haunts before described; and close to the bank side, large angles and holes that are weedy, short, deep and still; and near to some ford, shallow, or scour, in which generally the young fry abound, are most commodious for pike fishing, because in such, pikes are most easily and certainly found: and when you see any stand or place at any water side, in which pikes are, that are much beaten, or trodden bare by anglers for other fish, those may be accounted principal haunts of pike; for by baiting the ground in such places to catch other fish, pikes are much brought thither to prey upon the small fry that will be sure to resort to those places, more than to any other. In such places the angler must expect to have extraordinary sport with his troll, &c.

Now, because pike alter and change their habitations with the seasons of the year and weather, I will here briefly, and more particularly, acquaint you with the various times and places of their resort and abode, especially in rivers.

All the winter months they lie in the deepest and most obscure places, very near the ground; and in the latter end of February and beginning of March betake themselves to the scours and other convenient places,

places, where they then leave their spawn, and spawn no more that year. In April and May they advance higher among the shallows, which abound with shoals of wanton fry, and near thereunto take up their summer apartments, frequently falling forth amongst the small fish, seeking a more plentiful food, air and exercise, after a solitary, hungry winter life; and when they have there glutted themselves with their summer delights, in September they begin to retreat towards their winter quarters, if not prevented by floods, or other things that might stop their so passing. And this is their monthly and annual course of life, according to heat and cold; but they are best in season in September and October.

The best baits to troll, or catch pike with, are small trouts, samlets, gudgeons, roach, dace, lobworms and young frogs; and they are frequently taken with flies made for that purpose.

Forasmuch as spawning time in February and March is the season wherein all thoughts of fishing for pike ought to be laid aside, not only for the preservation of the species, but because they are then out of season and worth but little; for which reason I would advise the angler to forbear the laborious, yet pleasant, exercise of trolling till April, which will make him amends for his gentle forbearance, and sufficiently recompense his generous cessation; not only in the salubrity of the air, but the fruition of a pleasant spring, after a cold, dull, and phlegmatic winter; in hearing the airy choir warble out their charming notes, and melodious accents in woods and groves, with variety of other delights. And now the bait, which in spawning time was nauseous to the pike, is become very desirable, and will not be forsaken by him; and though they are not yet



yet arrived to their summer's fatness and firmness, they are now become greedy of their prey, afford good sport, and will make a good dish.

But I account September and October the prime months for trolling; not only in respect of the then goodness of the fish, having had all the summer's feed, the temperature of the air, and falling down of the weeds, but also for the lowness of the water, whereby the fish are much easier found in their harbours.

If you would know more particularly what times of the day are best all the year long for this recreation, take them as followeth; in April, May, June, July and August, pikes bite best early in the morning, and late in the evening; but in a hot sun-shine day, fish rise up towards the surface of the water, for coolness and air; at which time a snare is more likely to prove effectual, than the most tempting baits: besides, extremity of heat depraves the appetite, and begets a loathing of food, as well in the watery inhabitants, as those that dwell on the earth; but in September and October they bite well all day long, but best about three o'clock, and whenever you troll, let it be in clear water, and the more windy the better, if you can endure it.

To troll for a pike, you must be fitted with a good trolling rod, and every material for that purpose. When you come to the river, meer, or pool, you intend to fish in, try the bank side on each hand of you; after that, cast your bait as far as the place will allow, directly forwards; afterward, all about where you can, fishing close, but not twice in a place, always suffering your bait to sink some depth before you pull it up again: but where the water is very foul and weedy, you must drop your bait in, here and there, in holes amongst weeds, under trees

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and bushes, and in all other likely places where pikes frequently haunt; and because I find it too tedious to wind up my line after every throw upon my tumbrel, I always gather it up round the four fingers of my left hand, to hang upon my hand in skains or hanks, of about eight or ten inches long, as I draw it towards me.

When you cast your bait any considerable distance from you, let it sink about mid-water, then draw it gently towards you, not snatch it hastily out of the water, lest you prevent the pike's taking the bait, or, if he should have hold of it, check him; then sink it very softly again, and draw it as before; and after this manner do, till a fish has taken it, or you have brought it home to you for another throw: and when you only think you have a bite, draw your line strait, but very leisurely, and feel it; if he be a fish, your gently moving of the bait will make him but the more eager, and perhaps to move with it, and gorge it the sooner; or at least, not to forsake it, as he sometimes will, if you stir it but a little, to make him think your bait strives to get from him.

When you have no bite, and brought your bait home, and almost to the top of the water, take it not out hastily; for many times a pike will hold on the bait just as it is leaving the water, for fear it should quite escape him. I have sometimes had them leap out of the water after the bait, though I have played it near the bank side a pretty while before I took it up. Perhaps the cause of his leaping thus out of the water after the bait might be his not seeing it sooner, or coming too late to the place; for they commonly rise, or shoot at a bait, if near enough, at the first or second sight, if at all, that time.

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When you have a bite, and have given it a convenient time, *i. e.* half a quarter of an hour, or till you see your line move in the water, whereby you may pretty safely conclude he has paunched the bait, and rangeth about for another prey, draw a strait line, and hook him with a small jerk, and then make your pastime as you can. If you find him a large one, give him scope enough, if the place be not very foul, till you find him better pacified, by letting him go with a stiff line, and drawing him in again: but hold him not to it, lest he break hold, or tear out his own stomach, which is but tender, rather than become your captive. When you have brought him to the bank side, either take him up with a landing-hook, or net, or, for want of them, clap your finger and thumb into his eyes, which is the surest and safest hold with the hand.

Sometimes a pike will take your bait and presently leave it, and after he has left it, will come again and carry it to his hold, and play with it, and at last leave it; and at another time, a pike that takes your bait most greedily at first, and carries it farthest, will, notwithstanding, forsake it: therefore, to be meet with such fish, make use of the snap; always observing not to use a large bait with a small hook, nor a small bait with a large hook, but let your baits be in proportion to the size of your hook.

The most certain, sure and tempting way to take pikes at leiger, is with live baits, which is a bait fixed to a certain place: and to keep your baits alive the longer, whether it be a fish or frog, observe this method: if it be a fish, as roach, dace, samlets, small trout, or gudgeon, which are all good baits, then make an incision upon the side of the fish, from the vent near to the head; then with a probe open the passage between the skin and the body,

dy, for the more easy entrance of the wire; now having wound your line on your fork, and placed it in the slit, set off the bait alive, where you would have it rest, that the bait may hang about mid-water. Your line for this purpose should be about ten or twelve yards long, that when the pike comes, he may the more easily run off to his hold, in order to pouch the bait.

To take them by snaring or haltering, the chief months of the year are May, June, and July, in hot sun-shine days, and in the hottest time of the day, when most glowy, they then appearing towards the top of the water; but you must go warily to work, and not appear too openly, or with much emotion. When you have spied a pike, fix your eyes steadfastly upon him, without looking off him, which will make him lie the stiller; for unless he is well settled in his station, a small disturbance will sometimes move him, and make him fly from you; therefore when you look for him, have your snare with you ready fixed. After this manner, take a strait, tough, taper pole, also stiff and strong enough, but not too heavy, of about four yards long; fasten to the smaller end a piece of hard twisted whipcord, of about a yard in length, more or less, according to the depth of water; and the other end of the whipcord fasten to a well nealed brass wire, made into a noose or snare, like a hare gin; or let it be all of well nealed wire, and no cord. Having opened the noose wide enough to slip over his head without touching him, let it down with your pole into the water, even with the pike, two or three yards before him, and guide it very gently towards his head, fixing your eye still on the fish, till you have put the snare over his head and gill fins, but no farther; then immediately with a strong jerk upright,  
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right, hoist him amain to land. The keeping your eye as much as you can on the pike, will cause him to look on you the more, and mind your gin the less. Take care that your pole be not brittle or rotten.

Thus you may also halter other fishes, if you go circumspectly to work; as trouts, both at mid-water and bottom, if you can find them lie conveniently for your purpose; and at bottom, eels.

The PEARCH, called in Cumberland, Barfe, is generally, when full grown, about twelve or fourteen inches long; sometimes, though but seldom, they attain to fifteen, which is an extraordinary size.

This fish is hog-backed, and rather broad than otherwise. The colour inclines a little to a dusky yellow, with five or six blackish places like girdles proceeding from the back towards the belly.

The flesh of this fish is firm and of an agreeable taste, of easy digestion, and very wholesome; but the liver is usually thrown away, because it is apt to be measly.

They spawn but once a year, and that is the latter end of February. Some think the male is to be distinguished from the female by the fins being of a deeper red.

The most natural places for this fish are rivers, and yet he will live and thrive well enough when shut up in a pond. In the day time he does not seem to be fond of any particular haunt, because he is almost continually roving about in quest of food, being a very voracious fish: and yet they are more likely to be found under the hollow of a bank, the piles of bridges, stumps of trees, or in a gentle stream of a middling depth. In the night, indeed, they retire



to a place of repose, which if you are so lucky as to discover early in the morning, you have a fair chance to take them all, for they bite very boldly, and generally herd together, and the taking of one does not discourage the rest from falling into the same danger.

He bites best in warm weather; yet, in the very midst of summer he is soonest taken in cool, cloudy and windy weather, and you may angle for him any time of the day; but you will be more likely to succeed from five to eight in the morning, and from four till sun-set in the afternoon.

In angling for perch you need not continue long in the same place, for they usually bite as soon as the bait drops in. You ought to angle at or near the bottom, constantly raising your bait almost to the top, letting it drop gently again. The dock or flag-worm is an excellent bait.

The most likely baits are worms, minnows, and small frogs; but the most sure killing is the brandling-worm, two upon the hook at a time, well scowered in moss, unless it be in the Mole, and some other rivers that run into the Thames, where minnows are scarce: but they are not very nice in the choice of their feed, and have even often been caught with a fly in fishing for trout.

They take the bait best within a foot of the ground, and swallow it instantly, because they have the largest mouth, in proportion to their size, of any other fish; however, when you fish with a minnow or frog, they should have a little more time when you strike, than when you bait with a worm.

The perch is a fish that struggles hard for his life, and consequently yields the angler much diversion. When a perch is pursued by the pike, he sets up his prickly fins, and often saves himself from being

being swallowed. If you find that you have a bite from a large one, give him a little time to gorge the bait; but if it is a small one, you may strike instantly, especially if your bait be a brandling.

He will bite at a worm, a minnow, or a little frog, of which you may find many in hay-time. Of worms, the lob-worm or brandling is taken to be the best, being well scowered in moss or fennel; and next, the worm that lies under a cow-turd with a bluish tail. He will also take the red-worm and the dew-worm.

When the perch bites, be sure you give him time enough to pouch the hook, for there was scarce ever any angler that gave him too much. Some, in angling for perch, will suffer their bait to touch the ground, especially when they fish with a worm. The turning of the water, or eddy, in a good gravel-scour, is an excellent place for sport. Your tackle should be strong, because, in fishing for perch, pikes are often taken. Bait the ground over night with lob-worms cut in pieces.

The following directions in angling for perch with a worm may be worth observing. In March use the red-worm at the bottom; in April, the oak-worm, a young frog with its feet cut off, or a red snail; in May, the deck-worm, or the bait that breeds on the osier-leaf, the oak-leaf, and the hawthorn; in June, the red-worm with the head cut off, and a cod-bait put before it, or the dor; in July, the large grasshopper, or dunghill-grub; in August, and the following months, red-worms, or brandlings; at any time two or three gentles.

He has often been fished for with two hooks and a live minnow with good success. The hooks have been tied to silk, one of which is put through the

upper jaw, and the other through the middle of the back.

When you bait with a frog, thrust the hook through its leg near the thigh; and when you throw it into the water, keep it from shore as much as possible, for it will be for making thither unless prevented.

As the perch generally swallows the bait, and as it is difficult to get the hook out of his entrails without breaking the line, it will be necessary to carry an instrument in your pocket which is called a gorge. It may be made of iron, or wood, about six inches long and half an inch thick, with a hollow at the extremity. This hollow end you are to thrust down the throat of the fish till you feel the hook, at the same time keeping your line strait, lest the hook should catch again. When you have disengaged it with this instrument, you may draw them both out carefully together.

The **TENCH** is a leather-mouthed fish; his colour being, as it were, tinged or died of a greenish hue; his scales very small, fine and smooth; his fins large, red circles about his eyes, and little barbs at the corners of his mouth; slimy like an eel, and something like eels in taste. They are of very good nourishment, especially such as are bred in pools or ponds that are not very muddy. He has a natural balsam on his skin, and so medicinal to other fish, that he is stiled physician to all his co-inhabitants in his watery region: and for his balsamic virtue, is so great a favourite of the pike, that he would sooner prey on his own kind than upon that species, but when hungry will not spare him.

The tench is observed to delight more in ponds, or pits; than rivers; and loves to feed in deep still waters,

waters, covered with weeds or batter-docks; and thrive best in muddy soil, and frequents only the most deep and quiet places in rivers.

Tench generally spawn about the latter end of June, or beginning of July. In some ponds they breed much, but thrive little; and in others grow large, but breed little. They are best in season from the latter end of September till the middle of May.

Tench bite best in April and May, in warm, cloudy, or misting weather, particularly if there is a fine breeze of wind from the south, or west, as they bite more free at bottom, than in calm, hot, sunshine weather. The reason why they bite the better is, because the wind cooling the water makes the fish the more hungry, and the tossing of the waves emboldens them the more to range about for food, they then not so easily discerning any thing that may annoy them. The best baits to take them are well-scoured worms, wasp-grubs, and maggots: and when you angle for them in river, pool, or pond, bait the place for three or four times with the same sort of baits you intend to fish with. Your line should be strong and fine; the bottom should be about two yards of fine gut, or grafs, with a swan or goose-quill float. The same tackle will serve for carp or perch.

The CARP grows sometimes to the length of a yard and a half, and a proportionable thickness. In 1739, a pretty large one was caught in the Thames, near Hampton-Court, which weighed thirteen pounds. The colour of this fish, especially when full grown, is yellowish; the scales are large, the head short, and like that of a tench; the mouth is of a middle size; the lips fat, fleshy, and yellow.

It is without teeth ; but there is a triangular bone in the palate, and two other bones in the throat, which serve for the same purpose. On the upper lip, near the corner of the mouth, are two yellow appendages, which may be called mustachios, from their situation. The fins are large, the tail is broad, a little forked, and of a reddish black. The lateral line is strait, and passes through the middle of each side.

It has no tongue, but in the room thereof nature has provided a fleshy palate, which being taken out of the mouth looks like a tongue, and some persons pretend to be positive it is one.

They spawn several times in a year ; but the principal are in May and August, in which months they are lean and insipid, and consequently out of season. The females drop their spawn as they swim along, and are generally followed by thirteen or fourteen males, who impregnate it as it falls, yet a great deal of it perishes. They are in highest request in April. Willoughby affirms the largest weigh about twenty pounds.

One thing observable in a carp is, that it lives the longest out of the water of any other fish ; and Mr Derham assures us, that in Holland they hang them up in cellars, or other places, in a small net, full of wet moss, with only their heads out, and feed them with white bread soaked in milk for many days.

The flesh of the river carp is much better than that of the pond, and, in general, it is more or less wholesome, according to the nature of the water in which they are bred, and consequently muddy stinking ponds produce the worst fish. It is soft, insipid, and not altogether free from visciditv : but your curious eaters value it chiefly for the palate, or tongue, as they call it.

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The river carp is not fond of a rapid stream, but delights in a still deep water, with a marly or clay bottom, especially if there be green weeds, which he loves exceedingly.

A carp exercises the angler's patience as much as any fish, for he is very fly and wary. They seldom bite in cold weather, and in hot, a man cannot be too early or too late for them; yet when they do bite, there is no fear of their hold.

Proper baits are the red-worm in March, the cadew in June, and the grasshopper in July, August and September: but a recent discovery has proved a green pea to be a bait inferior to none, if not the best of all; and that the best method to prepare them for use, is by half-boiling a sufficient quantity, and covering them with melted butter.

In hot weather, he will take a lob-worm at top, as a trout does a fly; or, between the weeds, in a clear place, sink it without a float, about eight inches in the water, with only one large shot on the line, which is to be lodged on the leaf of some weed: then retire, keeping your eye upon the shot, till you see it taken away, with about a foot of the line, and then you may venture to strike; but keep him tight, and clear of the weeds. Great numbers of carp have been taken this way.

In ponds, the best method is to throw six or eight slices of bread, to be carried with the wind, and in a short time, it is probable, you will see many fish feeding on it: if not, crumble a little very small, and cast it in where the slices rest, which will be a means to make them find the pieces at top; which when you have suffered them to feed on, take a very long rod, strong line, middle-sized hook, and one shot fixed just above your hook, and baited with about the size of a large horse-bean of the upper

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crust of a rasped French roll; and you may pick out what size and quantity you please, by dropping your bait before the largest fish, as he is feeding on the slices at top. This is a sure means of getting sport, and but little known.

As before observed, this fish is very cautious, and therefore your float must be small, and you must be sure to keep out of sight. And because, when hooked, he struggles in a violent manner, you must take care that your tackle be very good and strong, otherwise he will break from you.

When you have found a place which you think a likely harbour for carp, you should plumb your ground over night, in order to find the depth of the water; likewise at the same time bait the place with small bits of congealed blood, boiled malt, wheat, or rye, mixed with bran.

The next morning early repair to the place as gently as you can, taking care, as said before, to keep out of sight. When you have a bite, let the float sail away before you strike, and then do it strongly, and the contrary way to the motion of the float, and there will be less danger of pulling the bait out of the fish's mouth. When you have hold of him, if your tackle be good, you need not fear losing him, for he seldom or never breaks his hold; and, if possible, prevent him stretching your line along his back, lest he cuts it with his saw-fin, which is on his back.

When you angle for a carp, you ought not to forget your landing-net, which is by much the safest way of taking him out; otherwise play the fish till you draw it to the shallows, where you may fix your rod upright in the ground at a proper distance from the river, and, putting both your hands under the fish, throw it on the shore.

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If you are desirous of angling with a paste, the following is as good as any. Take fine flour, a bit of lean raw veal, a little honey, and cotton wool sufficient to keep the ingredients together, and beat them in a mortar to a paste; or white bread mixed with cotton-wool, and worked into a paste with some of the water where you are fishing, is not a despicable bait. Carp will take red currants, green figs, or almost any sort of bait. When you fish with a grasshopper, you must take off its wings, and let it sink into the water without lead or float. Gentles, two upon a hook, and throw in chewed white bread, is a good method to angle for carp, especially in a pond.

The BREAM is a broad fish, with a small head, big eyes, and a small leather-mouth, but no teeth; the palate of him is soft and fleshy, like that of a carp, and very much resembles a carp, being very broad, with a forked tail; he is covered with curious network scales; his flesh is soft and clammy; the best parts of him for eating are his belly and head. His flesh is reckoned of better nourishment than that of a carp, and of easy digestion. Breams grow very slowly, yet to a large size, and are great breeders, therefore should be put into great waters only; for it is observed, the milt has two large milts, and the spawner, two large bags of spawn, therefore should be put in waters only with fish of prey.

Breams spawn the latter end of June and beginning of July, and are best in season in May, though some think them best in September, having then had their summer's feed. Some will affirm that breams and roaches will mix their eggs and milt together, which is a mistaken notion, for the roach spawns

spawns the beginning of May, and the bream not before the latter end of June, or beginning of July.

Breams swim in shoals or great companies, delighting most in gentle, soft streams, sandy or clay bottoms, in the deepest, broadest, and middle parts of ponds; and in the deepest, broadest, and most quiet places in rivers, near weeds.

There are many sorts of baits to take bream, *viz.* well-scowered red-worms, maggots, wasp-grubs, flag, or seg-worms, which are found at the roots of fags in watery places; likewise, grass-hoppers, cabbage-grubs, and cod-baits: but I think the well-scowered red-worm the best for taking these fish. The river, pool, or pond, you intend to fish in, must be baited for three or four days after this manner: take a peck of malt, boil it in a kettle, or rather stew it, then strain it through a linen bag, and when the malt is almost cold, repair to the water you intend to fish, baiting the places with part of the stewed malt for three or four times: then having your tackle ready, after this manner; take two or three long angling rods, your lines strong and fine; the bottom should be about two yards and a half of good, strong, round gut, or grass; use large swan or goose-quill floats on your lines; let your lead, to poise the float be about a foot from the hook. Being thus prepared, the best times to angle for them, in the hot summer months, is from three o'clock in the morning till eight or nine in the forenoon, and from five in the afternoon as long as you can see. If the place is convenient you fish in, and make use of two or three rods, let them be distant from each other about eight or ten yards, letting your baits just drag upon the bottom, keeping out of sight as much as you can, throwing in, now and then, a little of your ground-bait, to keep them together. When you have

have a bite, strike not too hastily, till you perceive the float gone out of sight; then strike gently, keeping your rod to a proper bend, that it might tire him a little; for if both pull together, you are sure to lose the fish; either line, hook, or hold, will certainly break: but I would advise to make use of a reel upon your rods, for carp, barbel, and bream; the length of the line kills the fish with ease, and makes the angler excellent sport.

The FLOUNDER is a leather-mouthed fish, without scales, and of good nourishment; they strengthen the stomach, beget an appetite, and are well tasted: being originally a sea fish, which wanders very far into fresh rivers, and there dwells, and loses himself. They will grow to be almost a foot long, and broad in proportion. The best flounders have red spots.

The flounder likes a gravelly, sandy bottom, and deep, gentle streams, near the banks, or in gentle streams that are a little brackish, and are to be found near sluices, and flood-gates, and close to the banks.

The best baits for flounders are marsh-worms, dunghill red-worms, or gilt-tails, well-scoured. Your line must be fine; your lead must lie upon the bottom; and when he bites, move your bait a little, very gently, which will make him more eager. He is very wary, and so cunning, that he frequently sucks the bait off your hook, and leaves it bare; and if he perceives the hook before he swallows it, will not take it at all. They will bite all day long, from March till the latter end of July, and but very little after that.

The BARBEL is a beautiful, well-shaped fish. The back is of an olive colour, the belly silver. It



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is speckled on the back and sides with small black spots. His make is long and roundish, and his snout sharp. His mouth is not large, but the upper jaw is more prominent than the lower. He has four barbs, or wattles, from whence he derives his name; two near the corners of his mouth, and two near the end of the snout.

The barbel cannot well endure cold, and therefore, in the winter time, he is sick and languid, but in the summer clean and sound.

The flesh is soft and flabby, and in no great esteem. The spawn is unwholesome, purging both upwards and downwards, and is thought, by some, to be little better than poison. The male is much better than the female. Their principal season is September.

Their size is from a foot to a foot and a half long. The sort which are usually met with weigh about seven or eight pounds; yet a person at Staines caught one of twenty-three pounds weight: his bait was a bit of rusty bacon.

He is bred in most rivers; and the Thames, in particular, abounds with them. In the summer he haunts the swiftest and shallowest streams, where he lurks under the weeds, and works and routs with his nose in the sand like a hog; yet sometimes he retires to bridges, flood-gates, locks and weirs, where the waters are swift and deep.

He never feeds off the ground, and will take any sort of worm, bits of bacon, old cheese, or new cheese, if kept in a linen rag dipped in honey two or three days to make it tough. The watermen, who attend on you when you fish in their boats, sometimes provide greaves, to be had at the tallow-chandlers, for a ground bait over night, yet most commonly they use the same worm that you bait with.

with. They are a very subtle, strong fish, and struggle hard for their lives, and will often pick off your baits.

Your rod must be very strong, with a tough whalebone at the end. You have no occasion for a float, but must put a large bullet on the line, that your bait may lie ledger. You must have ten hairs next the hook, but the remaining part of your line must be silk. If you make use of a wheel, as in trout-fishing, it will be so much the better.

The most famous places near London for barbel angling are Kingston-bridge and Sheperton-deeps; but Walton-deeps, Chertsey-bridge, Hampton-ferry, and the holes under Cooper's hill, are thought to be in no wise inferior. You may likewise meet with them at all the locks between Maidenhead and Oxford.

The CHUB, CHEVIN, or BOTLING, is so called from his thick chubbed make, and is the same fish as the chevin, or botling. He is a leather-mouthed fish, and a fish of prey, having his teeth in his throat; grows to a large size; is very shy, timorous, and of great strength: but if you give him a turn, he is sluggish, and easily overcome. His spawn is good, but his head is the best part of him, but if dressed when fresh in the winter months, which being his prime season, he eats very well.

Chubs spawn the beginning of May, come in season in August, and continue good till March; are in their prime all the winter, being then the fattest, and not so bony as in the summer.

Chub delight mostly in large deep rivers and streams, and in the angles or deep holes of rivers that are shady. In the hot months they are to be found in or near to fords where cattle come to cool  
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and shade themselves, feeding on the dung they let fall into the water. They thrive well in ponds into which any stream or rivulet runs.

Chub at any time of the year will bite all day long. The best baits to take them at bottom are maggots, wasp grubs, or beef's brains; but the last the best. Your line for this purpose must be strong and fine; the bottom, about two yards of good round, strong gut or grass; a swan, or goose-quill float, with a cork; your bait must be within an inch of the bottom. You must bait those places you intend to fish, about an hour before hand, with the brains cut in small pieces; that you put on your hook about the size of a nutmeg. When the fish bites, you must strike immediately; if you miss the fish, you are sure to lose the bait, being so very tender. This is the best bait that can be used for chub, and by frequent using never fails of success. The wasp-grub is the second best bait; and maggots are very good baits. They are to be taken by bobbing, or dabbing, in the hot summer months, with almost any fly you can catch. Be sure to keep out of his sight, otherwise your attempt is in vain, being a very shy and timorous fish. He is to be taken with a cabbage-grub, grass-hopper, and cod-bait, either natural or artificial; which are all excellent baits, and will take almost all sorts of fish, in all kinds of water; in deep and still waters, as well as in bubbles, curls and streams: and what makes this method of fishing more pleasing is, that you are always in exercise. It would be too tedious to enumerate the different sorts of baits chub will take; but the best are what I have before mentioned.

The DACE, or DARE, is not unlike a chub, but proportionably less; his body is more white and flatter,

flatter, and his tail more forked. He is not so broad as a roach, and is a leather-mouthed fish.

He breeds almost in all rivers, and generally lies near the top of the water in summer. He is a very brisk and lively fish, and swims swiftly like a dart, from whence he derives his name.

The flesh of the dace is sweet, soft, and of good nourishment, but is in no great esteem.

They spawn in February and March, and are fit to eat in April and May; but their highest season is from September to the latter end of February.

They delight in gravelly and sandy bottoms; and the deepest part of the river, under the shade of trees, or dock leaves.

They are a very simple fish, and will often bite when you least desire it; however, their darling bait is a gentle at the bottom, and a small fly at the top. In the summer months an ant-fly is the best. They will likewise take any paste, as well as all sorts of small worms.

Angle for him with a very slender rod, a line of single hairs from the top to the hook, which is to be a very small one; one small shot, a float made of two sea-gull quills, cut within about half an inch of the feather, and thrust one of the open ends into the other, and then whipt fast with fine waxed silk. This makes the very best float, and is drawn under the water without danger of pricking the fish. When you are so provided, get some white bread, and chew it, and throw it into the water in small pieces, and bait with gentles, you will have good sport; or you may fish with boiled malt, and bait with grains, and you will frequently catch chub, bream, and many other sorts of fish. He will likewise take all sorts of flies very well. If you point your hook with one gentle in the spring, he takes an earth-bob very well.

1f

If you angle where two mill-streams are going at one and the same time, let it be in the eddy between the two streams: first make use of your plummet; and if the water be deep, you must angle within a foot of the bottom, and perhaps you will find but little sport: but if it proves to be shallow, that is, about the depth of two feet, or not exceeding three, then bait your hook with three large gentles; use a cork-float, which ought not to be a foot and a half from the hook, and have a quick eye to strike at the very first bite; for if there be any large dace in the mill-pool, they will resort to the eddy between the two streams.

The **ROACH** is a leather-mouthed fish; has no teeth; his eyes, fins and tail are of a red colour, and is a very bony fish, and for his simplicity is stiled the fresh-water sheep. They will grow to be about eight or ten inches long, and eat very well, especially their spawn, being a healthful fish, not subject to any disease; from whence comes the proverb, "as sound as a roach."

Their haunts are much the same as the dace, loving the deepest and stillest waters. They spawn about the middle of May, come in season about Michaelmas, and are very good till the latter end of March.

Roach bite best in the summer season, from about four in the morning till nine in the forenoon, and from four in the afternoon till sun-set. In the winter they will bite from ten in the forenoon till three in the afternoon, at any of the dace baits; your tackle the same; and to be fished for after the same manner, observing to let your shot drag on the bottom; for they will take it more freely off the bottom than shallower. There is another excellent bait for a roach



roach in the winter, which is a white worm with a red head, about the bigness of a cod-hair, to be found after the plough-tail, upon heath or sandy ground, or turning up the green-sword of fresh land. I myself have taken with this bait, in the river Trent, thirty pounds weight in a morning: the roach in that river run to a large size; from three quarters of a pound to a pound and a half in weight. When you use this bait, bait the places you intend to fish, with stewed malt, or fresh grains. This is the best bait for roach and dace known of, except maggots, or gentles.

The GUDGEON is generally five or six inches long, sometimes in the Mersey eight or nine; of a smooth body, with very small scales. The back of it is dark, but the belly pale.

They are to be met with every where in rivers; but in some they grow to a larger size than others.

This fish spawns twice a year; the first time about the latter end of April, and the second in November.

His flesh is very well tasted, of easy digestion and very nourishing, insomuch that some think it no way inferior to a smelt.

He delights in sandy, gravelly bottoms, gentle streams and small rivers. In the summer time he resorts to the shallows, and in the winter to the deeps.

He bites all day from the end of March till Michaelmas, but not till an hour after sun-rise, nor longer than an hour before sun-set. You may sometimes have full as good sport an hour after sun-set as at any time of the day, especially if you angle in some place about a yard and a half deep, with a  
sandy

sandy bottom, below some scower, or near the place he bites at in the middle of the day.

The principal baits are the small red worm, gilt-tail, brandling, and a meadow-worm. He will likewise take a gentle, cod-bait, brood of wasps, or cow-dung bob; but the small red-worm is what pleases them best. If you can find a bridge or plank over a small river, chuse to angle underneath for gudgeons, for they love the shade; and are so far from being shy, that you may not only appear in sight, but if you drive them from their place of resort, they will immediately return. A single hair line, a fine taper rod, a float and a small hook, is what most use, and the bait to drag on the ground.

When you angle for them in the shallows, rake up the sand or gravel with a rake or pole, and it will draw your gudgeons about your bait; when you have no such conveniency, throw in some handfuls of earth. Use a float, and let your bait always touch or drag on the ground. Be not too hasty with them when they bite, because they will sometimes nibble a little before they take it, though they commonly bite pretty sure.

When you angle for them in a boat in the Thames, let the waterman rake the gravel up to draw the gudgeons about you; then plumb the ground, and bait your hook with a small well-scoured red-worm; by this method you will seldom fail of good sport. Your tackle, as for dace, with a well-scoured gilt-tail. He is caught in deeper water morning and evening till mid-day. There have been fifty dozen taken by anglers at Thelwell Weir, in the river Mersey, in one day. You may use two hooks at a line, and two rods are not amiss; and then you may sometimes take perch or trout instead of gudgeons.

The

The RUFF, or POPE, is called by some *aspredo*, from the roughness of its body, and by others, *perca fluviatilis minor*, from its likeness to a perch. When largest, it seldom exceeds six inches, and is covered with rough prickly scales. The fins are prickly also, which, like a perch, he bristles up stiff when he is angry.

The time of spawning is in April. The flesh is second to none for the delicacy of its taste.

It is found in most of the large rivers in England, particularly the Yare in Norfolk, the Cam in Cambridgeshire, the Isis near Oxford, the Sow near Stafford, the Tame that runs into the Trent, the Mole in Surry, &c. The most likely place to meet with him, is in the sandy and gravelly parts of these rivers, where the water is deep, and glides gently along; and if you meet with one, you may conclude there are more, for they generally herd together in shoals.

He will take almost any bate, and bites at the same time as the perch. However, a red-worm, or small brandling, is to be preferred, finding it to be a bait they generally covet; yet some have taken them with a minnow, almost as big as themselves, when they have been angling for trout.

The best way, before you begin, will be to bait the ground with two or three handfuls of earth, and then you will be sure of diversion if there are any ruffs in the hole, and will stand a fairer chance to take them all. Sometimes use a pater-noster line with five or six hooks, according to the depth of the water; for when it has been a little troubled, they will take the bait from the top of the stream to the bottom.

The

The BLEAK is a small fish, seldom exceeding three inches long; is of a bright whitish colour, the back of a greenish cast, and his belly of a more glossy white. He is also termed the fresh-water sprat; much resembling the sea sprat in size, shape and complexion. By some he is called the river swallow, from his continual motion, and dexterity in catching flies and small insects, that float upon the surface of the water. He is a pleasant eating fish, if dressed soon after taken.

The bleak is to be angled for at mid-water, with a line, and about five or six small hooks, fastened at the distance of about six inches, one above another, baiting your hooks with small maggots; by which means you may take three, four, five, or six at a time. They are to be taken by whipping for them, with two or three small gnats upon your line; which, in a summer evening, affords the angler very pretty sport.

The Latin writers call the GILT-CHAR *Carpio lacus Benaci*, because they imagined it was only to be met with in that particular lake; but it has since appeared to be the same fish with our gilt-char, which is bred in Winander-Meer, in the county of Westmoreland. It is proportionably broader than the trout, and the belly is more prominent; but its length, when greatest, never exceeds twelve inches. The scales are small, the colour of the back is more lively than in a trout, and is beautified with black spots; the belly and sides, beneath the lateral line, are of a bright silver colour; the skull is transparent, and the snout bluish; it has teeth in the lower jaw, on the palate and the tongue; the swimming-bladder is extended the whole length of the back, and the gall-bladder is large.

The flesh of the gilt-char is red, and is counted so very delicious among the Italians, that they say it excells all other pond or sea-fish whatever; and they esteem the nature of it to be so wholesome, that they allow sick persons to eat it.

Winander-Meer is a lake, according to Camden, ten miles in length, and in some places exceedingly deep; therefore they are only taken in winter-time, when they go into the shallows to spawn.

The RED CHAR is the *umbla minor* of Gesner, and other authors, and is known in Wales by the name of *torgoch*. The body of this fish is of a longer and more slender make than that of a trout, for one of about eight inches long was no more than an inch and a half broad. The back is of a greenish olive, spotted with white. The belly, about the breadth of half an inch, is painted with red, in some of a more lively, in others of a paler colour, and in some, especially the female, it is quite white. The scales are small, and the lateral lines straight. The mouth is wide, the jaws pretty equal, unless the lower be a little sharper and more protuberant than the upper. The lower part of the fins are of a vermilion dye. The gills are quadruple, and it has teeth both in the jaws and on the tongue; in the upper jaw there is a double row of them. The swimming-bladder is like that of a trout; the liver is not divided into lobes; the gall-bladder is large, the spleen small and blackish, the heart triangular, and the eggs of the spawn large and round.

The flesh is more soft and tender than that of a trout, and when boiled can scarcely be allowed to be red. It is in the highest esteem where known, and in Wales is accounted the chief dish at the tables of people of fashion.



### 93 THE ANGLER'S MUSEUM.

The chief place in England where this fish is taken, is Winander-Meer ; but in Wales they are to be had in five different places, namely, Llanberris, Llin-Umber, Ffestiniog, and Bettus, in Carnarvonshire, and near Casageddor, in Merionethshire. In this last county they are smaller than in the former, and are taken in October; but in Carnarvonshire, in one of the lakes, they are caught in November; in another, in December; and in the third, in January; and when the fishing in one ends, they begin in another.

They swim together in shoals, and though they appear on the surface of the water in the summertime, yet they will not suffer themselves to be taken either with the angle or with nets; therefore the only season for fishing is when they resort to the shallow parts of the lake, in order to spawn. At these times they set trammel-nets baited, and leave them for whole days and nights, into which the fish enter of their own accord.

Some have doubted whether the Welsh and English fish are of the same kind or not; but Mr. Ray thinks there is no room to make it a doubt. The Welsh name *torgoch*, signifies a red belly, which distinguishes the red char properly enough. The gilt char is, indeed, a quite different species, and is above twice as small as the red. The belly of the former is of a silver colour, the flesh is red, and the back is spotted with black; whereas the belly of the other is red, the flesh white, and the spots on the back white likewise.

The EEL I shall put amongst the fresh-water fish, as it has been customary; but by the following observations it will appear to have its origin in sea water.

The

The eel has a long smooth body, moistened all over with a viscous liquor, which renders it very slippery. He feeds on earth-worms, small fish, and snails.

With regard to the generation of eels, authors are divided in their opinions; for Aristotle assures us, that he could find no difference of sexes. Pliny affirms, that, though there are neither male nor female, they will rub themselves against rocks and stones, and by that means detach particles or scales from their bodies, that quicken by degrees, and afterwards become small eels. Some maintain that they couple, and at the same instant they shed a kind of viscosity, which, being retained in the mud, gives birth to a great number of the same animals.

Rondeletius informs us, that he has seen eels spawn together; and he thinks they cannot want the parts of generation, since, at the lower part of the body there is a vulva in the female, and semen in the male: but then these parts are so covered with fat, as well as the spawn, that they do not appear.

Boecler, and other moderns, think that they proceed from eggs; for though they are brought forth alive, and upon that account may be said to be viviparous, yet it does not follow from thence, that they may not be produced from eggs in their bodies.

Some Cheshire fishermen confidently affirm, that in January, where the Mersey joins the sea, they have seen eels linked together in the act of copulation; and that, on cutting open the bellies of large eels, they have found perfect little elvers, or eels, about the bigness of a small needle, which appeared to be lively, and were inclosed in a skin like a bladder, which stuck to the back-bone of the fish. These are supposed to be the eel-brood, which in the spring months swim on the sides of the said river as high as

Warburton, where the poor people catch them in scoops, in order to store fish-ponds, or sometimes to scald and make ell-pies with ; nay, so great plenty is there near Northwich, that the farmers catch them, in order to feed pigs with.

The time to find them with most certainty is, when the river is clear, at which time they come up with the tide, and may be pulled out. By dipping in a small sieve a great number may be caught.

When the rain falls about Michaelmas, and raises the fish-ponds, and other pieces of water, eels attempt their escape, and will get off, though their bodies be but half covered with water ; and, in general, the large ones, especially the females, make for the sea, whence it is doubtful whether they return ; for a merchant of my acquaintance has often seen eels called congers, when at sea, and once in a cave in Milford Haven killed one with difficulty that measured seven feet, and made good food for his ship's crew.

About Michaelmas, 1741, at an eel-fishery at Thelwell, in Cheshire, the fishermen did in one night catch in door nets a ton weight of eels, which, as supposed, were then striving to go down to the salt water.

There are four sorts of eels, the silver eel, the greenish or greg-eel, the red-fined eel, and the blackish eel ; this last has a broader, flatter, and larger head than the rest, and is counted the worst ; but whether these distinctions are essential or accidental, will admit of a doubt. In the Thames the fishermen give them particular names ; but the most usual are, the silver-eel and the greg : this last is thicker and shorter than the other sort, and of a darker colour.

Though

Though eels love to lurk and hide themselves in the mud during cold weather, yet they are averse to muddy water, because they are liable to be suffocated by it. They are caught in nets in the time of a flood, at mill-dams, and such-like places.

In the day-time they skulk among weeds, under stones, or the roots of trees, or among the planks, piles, or boards of weirs, bridges, or mills.

The proper baits for an eel are small gudgeons, roach, dace, or bleak. They are likewise fond of lampreys, lob-worms, small frogs, raw flesh, salted beef, and the guts of fowls.

The best time to angle for them is on a rainy or gloomy day, especially after thunder. Your rod must be strong, your line the same as for trowling, with an armed hook, and your bait must lie ledger.

Some catch eels with spears, one of which, a cord being first fastened through a hole bored at the top, being darted into the mud, in the middle or deepest part of a pond, where they lie in hot weather, it will so disturb them, that they will swim to the sides, where the eel will again strike into the mud, which will make a circle in the water, and guide the fisherman where to strike with another spear; by which means he may catch many fish.

Another way to catch eels is by laying baited night-hooks, which are to be fastened to a tree, or the bank, in such a manner, that they may not be drawn away by the eels; or a string may be thrown across the stream, with several hooks fastened to it. The line must be tied to a large plummet of lead or stone, which must be thrown into the water with the line, in some remarkable place, so that it may be found readily in the morning, and taken up with a drag-hook, or otherwise.

Sniggling or brogging for eels is another remarkable method of taking them, and is only to be practised on a warm day when the waters are low. This requires a strong silk line, and a small hook baited with a lob-worm. Put the line into the cleft of a stick, about a foot and a half from the bait, and then thrust it into such holes and places before mentioned where he is supposed to lurk; and if there be one, it is great odds but he takes your bait. Some put that part of the line next the hook into the cleft: but however that be, it must be so contrived, that the line may be disengaged from the stick without checking the eel when he takes the bait. When he has swallowed it, he is not to be drawn out hastily, but after he is pretty well tired with pulling, and then you will make him more secure.

N. B. When you broggle under a bridge with a boat, take care it does not strike against the bridge, nor disturb the water; either of which will drive them into their holes so far, that they will scarcely ever bite. The best and largest eels are caught in the Mersey by this method.

Another manner of sniggling which I have seen is this: take an ordinary sized needle, whip it only about the middle part, to three inches of the strongest fine twine, waxed, and fastened above to several yards of whip-cord, or packthread; thrust the end of your needle into the head-end of a large lob-worm, and draw him on (which with care you may easily do, the needle being strait) till you have got it up to the middle of the worm; then, in the end of a small long stick, which you may fix in a joint or more of your rod, let there be stuck another needle, fastened well from slipping out, with about half an inch of the point appearing: put this also into the head of the baited worm, and holding the whole  
length



length of the cord in your hand, together with the stick, thrust your worm between the cleft of any clods or piles in shallow water, till you have lost sight of it; then softly draw your stick away, laying it aside, keeping the line still in your hand, till you perceive it to draw, and after some time strike, as has been directed. The needle, which before this lay buried straight in the worm, will, by your stroke, be pulled quite across the throat of the eel, and hold him fast. When he is landed, you may, by squeezing one of the points through his skin, draw that and the whole line after it, without the inconvenience and trouble that is found in dislodging a hook. Before you strike, give your line a gentle pull, which will make the eel to shut his mouth, and prevent your needle slipping out, which it is apt to do, if you strike before he has gorged.

To bob for eels, you must provide a large quantity of well-scoured lob-worms, and then with a long needle pass a thread through them from head to tail, until you have strung about a pound. Tie both ends of the thread together, and then make them up into about a dozen or twenty links. The common way is to wrap them about a dozen times round the hand, and then tying them all together in one place makes the links very readily. This done, fasten them all to a small cord, or part of a trowling-line, about four yards in length. Above the worms, there should be a small loop to fix the worms to, and for a lead plummet to rest on. The plummet should weigh about half a pound, or from that to a pound, according to the stream; the smaller the line, the less the plum; it should be made in the shape of a pyramid, with a hole through the middle for the line to pass through; the broad part of the plummet, or the base of the pyramid, should be towards

the worms, because that will keep it more steady. When you have put your plummet on your line, you must fasten it to a strong, stiff, taper pole, of about three yards long, and then the apparatus is finished.

Being thus prepared, you must angle in muddy water, or in the deeps or sides of streams, and you will soon find the eels tug strongly and eagerly at your bait. When you have a bite, draw them gently up towards the top of the water, and then suddenly hoist them on the shore, or in your boat; by this means you may take three or four at a time.

It is not common to shoot eels, and less common to shoot them flying; but I know a Warrington gentleman that shot one in the air, weighing twenty-four ounces. A heron had first caught it, and was flying away. My friend aimed to kill the bird, which escaped, but dropped the eel, which was found to be wounded by the pellets from his gun.

William Bowker, of Latchford, saw a heron in a hard frost about to light; he ran for his gun, and just returned as the heron had picked up an eel by the side of the river. He shot, and struck the eel, but the heron escaped.

Whilst William Bowker was fishing near Stockport he had a bite, but pulled up too hastily for eels. Again he had a bite, and so had his companion, who pulled up a large eel, which proved to have swallowed both their hooks. A contest ensued, which, if the anglers had been rich, might have furnished a debate in Westminster-hall. A bye-stander proposed they should toss up for the fish; but William being the strongest man, and saying he would have it, for he was sure the fish took his bait, as his hook was deepest, in the belly of the eel, his antagonist yielded, and Bowker brought off the prize, weighing twenty-three ounces.

In

In the year 1740 was a land-flood in Cheshire, when William Bowker placed a net in the brook running by Mr. Egerton's, at Whithinshaw, where he caught one hundred pounds weight of eels; two of which were remarkable, being both blind, and weighing twelve pounds, and supposed to get out of some high pit which the water did not often reach.

In 1750, Robert Guillim, Esq. of Buissey, in Lancashire, invited the neighbouring gentry to dine under a tent near his fish pond, which the servants drew nets through, and amongst other fish pulled out an eel weighing six pounds; a gentleman present cut it open, and in its stomach found a half-digested eel of about a pound weight.

Sometimes, when I have been angling for other fish, I have thrown a long line into a likely place, with several eel-hooks on it, placed about a yard and a half asunder, and a heavy lead to sink it. The hooks were baited with lob-worms and small fish. I have not only caught eels by this method, but also pike and perch.

Some, near eel-haunts, sink a bottle of hay loosely bound, stuffed with fowls guts, and liver cut in long shreds, over night, and coming early the next morning, drawing it up hastily by the rope, fastened to the bank, find large eels bedded in it, for the sake of the prey. This may be done with a bundle of brushwood, out of which, upon pulling up, they cannot so easily get.

The EEL-POUT, or BURBOT, has a smooth, soft, slippery body like an eel, especially the belly. It has either no scales, or they are exceedingly small. The colour is blackish, resembling that of a tench. The head is a little flattish, and both the jaws are well furnished with small teeth. On the lower jaw

grows a barb of about half an inch long, and likewise a short pair between the nostrils and the snout; the tail terminates in a circular figure.

This fish is met with chiefly in the Trent, though there are some in the Severn. They spawn in December, and are so fruitful, that one roe contains no less than one hundred and twenty thousand eggs.

Their places of resort are the same as the eels, if within the reach of the tide; and the best time to take them is after a storm of thunder and lightning, with heavy rain.

The best bait for him is a small gudgeon, roach, or dace; your hook should be armed, on account of his sharp teeth, and because he is a vigorous strong fish, and struggles hard for life.

His flesh is good and sweet, and greatly esteemed. His usual size is from fourteen to twenty inches.

The SMELT is a fish for shape not much unlike a trout, only longer in proportion to its bigness. Its common size is about six inches long: but near Warrington these fish are often caught, which measure twelve or thirteen inches.

The back is of a dusky colour, but the belly and sides shine like silver. Those who examine them attentively will find small black spots on the head and back. The body is covered with scales, which fall off with the least touch. The skull is so transparent, that the lobes of the brain may be distinctly seen through it. The eyes are of a silver colour. The lower jaw is a little more prominent than the upper, but they are both well furnished with teeth; two of which in the upper jaw, and as many in the tongue, are longer than the rest.

The flesh is soft and tender, and of a delicate taste; it is so highly in esteem, that they are generally

rally sold at an extravagant price. All writers on this fish affirm, that it has the smell of a violet; but the vulgar opinion would have it to be that of a cucumber, or green couch of malt.

It is a fish of passage, and visits the Thames and other great rivers twice a year, that is, in March and August; in the first of these months they generally advance up the river as high as Mortlake, but in the last they make a stand about Blackwall.

In March, if the spring be mild, prodigious quantities of this delicate fish make their appearance in the river Mersey, which often seems of a greenish colour from the vast bodies of smelts which then swim about. At this time, every boat, every fisherman, and every net, is employed, and even the boys with cabbage-nets catch these fish, which are double the size of those usually caught in the Thames; oftentimes the baskets, pails, boats, and the very banks, are filled with sparlings, as they are called in Cheshire, where, from the great plenty, they are frequently sold at four-pence per score.

Some of these fish have been caught in Rostern-Mere, and other still waters, where the fishermen have washed the spawn from their nets; but these fish appear lean, and do not breed in ponds.

The best way of angling for them is with a Patter-noster-line, with a small shot to sink it under water. Your baits should be earth-bobs, gentles well scoured, paste, or the fish itself, cut into small bits sufficient to cover your hook. They are seldom caught with angling, as they stay about Warrington but a little time after they have spawned; but they are caught in the salt part of the river all the year round with nets.



The **STURGEON** is a long and pentagonous fish, that is, it has five rows of scales, which divide the body into as many angles. The belly is plain and flat.

The upper row of scales, which is in the middle of the back, are larger, and rise higher than the rest; the number of these is not determinate, being in some eleven, in others twelve or thirteen. This row reaches to the back-fin, and there terminates. The lateral rows begin at the head and end at the tail, consisting of thirty or thirty-one prickly scales. The lower rows, which bound or terminate the flat part of the belly, begin at the foremost fins, and end at the second pair. Each of these rows contain eleven, twelve, or thirteen scales. Every row of scales, in general, hath prickles on their tops, which bend backwards. Besides these five rows, it has only two scales in the belly below the vent. The head is of a moderate size, and rough, with very small prickles, as is the rest of the body between the rows of scales. The eyes are very small in proportion to the bulk of the fish, and of a silver colour. The snout is long, broad and slender, ending in a point. In the middle of the lower part of the snout, which is extended beyond the mouth, there are four barbs, or wattles, placed in a right line, which cross the snout transversely. The mouth is small, void of teeth, and placed over against the eyes; it is a kind of a small pipe, which he can thrust out and draw in at pleasure. He has no jaws, whence it is plain he takes no nourishment but by sucking. The tail is forked, but in such a manner that the upper part stands out much farther than the lower. The colour of this fish is of a dusky olive, or dark grey on the back, but on the belly of a silver colour; add to this, that the middle part of the scales is white.

They

They are brought daily to the markets of Venice and Rome, whence it is evident that they abound in the Adriatic and Tuscan seas; but they are small, as, indeed, they all are that keep constantly in the salt water. In the city of London they are now frequently seen, being brought in the fish carriages which were first set on foot by the society for promoting arts, &c. One of these fish was lately sold, which weighed one hundred and fifty-three pounds weight.

In rivers they increase to a monstrous size, some having been taken from fourteen to eighteen feet long; and Cardan saw one that weighed an hundred and eighty pounds; in the Elbe they sometimes amount to two hundred pounds; a German prince once took one of two hundred and sixty pounds weight.

Of the spawn of this fish there is made a sort of edible, which they call *cavear*, or *kavia*, and is a considerable merchandize among the Turks, Greeks and Venetians. It is likewise in high estimation throughout Muscovy, and has lately been introduced on the English table.

It is made after the following manner:

They take sturgeons spawn, and free it from the little fibres by which it is connected, and wash it in white wine or vinegar, afterwards spreading it upon a table to dry; then they put it into a vessel and salt it, breaking the spawn with their hands, not with a pestle; this done, they put it into a fine canvas bag, that the liquor may drain from it; last of all they put it into a tub, with a hole at the bottom, that if there be any moisture still remaining, it may run out; then they press it down, and cover it close for use.

The

The Italians settled at Moscow drive a vast trade with *cavear*, sturgeons being caught in great plenty in the mouth of the Volga, and other rivers that empty themselves into the Caspian sea.

In Holland they cut these fish into small pieces, and pickle them; then they put them in kegs, and send them abroad. This is in great esteem among us.

The common way of killing them is with a harping-iron, for they take no bait; and when they feed, they rout in the mud with their snouts like hogs. In the Mersey they have been caught with nets, but commonly they prove too strong to be stopped by such entanglement.

The MINNOW, or PINK, is one and the same fish. These little fish are all without scales, but for excellency of taste may be compared to any of the larger size. The upper part of them above the belly, is of a greenish watery sky colour; his belly white, and blackish on the back. They are full of eggs, or spawn, all the summer months, for they breed often, and quickly arrive at their full growth. They lie not much in deep waters, for fear of being devoured by the greater inhabitants of the deeps. They seldom grow above two inches long. They will bite all day long, from sun-rise till sun-set, and afford young anglers excellent sport, frequently taking two or three at a time.

The LOACH, in shape, is somewhat like a barbel, having a beard or wattles at his mouth; his back of a yellowish brown; has two fins at his sides, four at his belly, and one at his tail; seldom grows to be three inches in length. His flesh has a delicate taste, being very wholesome for sick persons. They are to be found mostly in small, clear, swift, shal-

## THE ANGLER'S MUSEUM. III

shallow, gravelly brooks, under stones, but are very seldom taken by angling.

The **BULL-HEAD** and **MILLER's THUMB** are one and the same fish; is of an odd shape, no ways pleasing to the eye; his head being big and flat, very disproportionable to his body; his mouth is wide and a-wry, usually gaping; his teeth are rough like a file; the upper part of his sides decked with various coloured spots; are full of spawn most part of the summer, and spawn in April. They are to be found in small rocky, gravelly brooks, where the water is very clear, and are easily seen upon any flat stone, or on the gravel, at which time he is to be taken with a small worm; and is more pleasing to the taste and nourishment, than for his shape and beauty.

The **STICKLEBACK** is the least and most contemptible fish; his body being fenced with several little prickles, very sharp, from whence he takes his name. This fish is only mentioned to make up the number of fresh-water fish, being too inconsiderable to afford the angler much sport; and the only use they are of, is to fish with them for a trout, the same as with a minnow. Aristotle and Pliny say they are bred numerously of abundance of rain, and that sometimes small fishes fall with rain, which it is very likely are suddenly generated by the sun's heat, within a cloud of watery vapours gathered together of the same nature.

The **LAMPREY** is called by Dr. Plot, The Pride of the Isis, and by others, Seven-Eyes, and is found in the Mersey, which waters the fertile banks of Cheshire.

It

It is a fish about ten or twelve inches long; on the back it is of a greyish black, but the belly is of a lively silver colour. Its mouth is round, and furnished with six or seven teeth. On the top of the head there is a hole, as in the cetaceous kind; for as the mouth, when the lamprey adheres to a rock or stone, is entirely shut, there is a necessity for a hole to take in the water, which is discharged again by the gills, or the seven holes placed on each side near the head. The belly rises and falls much in the same manner as in animals that breathe.

The liver is undivided, and the capsula of the heart almost boney, which is purposely designed by Nature as a guard or security for it, because this fish has no bones, not even so much as a backbone.

The river lamprey, contrary to the manner of other fish, procreate their species, with their bellies joined, which is easy to be observed, because at that time they get into shallow fords, where all that passes is visible enough.

The flesh is of a soft glutinous nature, and is generally eaten potted; and even then it is more agreeable to the palate than healthful to the body. Their time of spawning is in April.

They are the very best bait for night-hooks, cut in pieces about an inch and a quarter long.

There is another sort of this fish which is called the Blind Lamprey, which is small and round, like a large dew-worm, or lob-worm. It has no scales, and its body is divided into small rings by transverse lines, in the manner of worms. These rings are about eighty-four in number. The mouth is round, and always open, but it has neither teeth nor tongue. It has a hole on the head, and seven on each side, instead of gills, as in the other species. A good bait for chubs and eels.

LAM-



LAMPREY-EEL is of the same shape, but of a larger size than the lamprey, for it is sometimes taken in the Severn three feet in length, and the diameter of the body five inches. The skin is of a blackish colour, and full of palish angular spots; it is tough, but yet not taken off when dressed, as in eels. It will hold a bit of wood or stone so firmly in its mouth, that it cannot be taken out without difficulty. On the top of the head there is a white spot, and before it a small hole, encompassed with a membrane, which rises up a small matter; the use of it is the same as in the lamprey. The gills are concealed under the seven holes placed on each side. The edge of the mouth is jagged, and adheres so closely to any thing, that some have supposed these inequalities to be covered with pitch; whereas the teeth, properly so called, are placed on the inside of the mouth, and the more remote they are, the larger. It has no bones, but a gristle down the back full of marrow, which should be taken out before it is dressed. In short, they resemble a lamprey in all things.

They lie chiefly in the sea, but come into the rivers to spawn, where they are found in great plenty. They are discovered by the froth that rises from them.

Their highest season is in March, when they first enter the rivers, and are full of spawn. In April they make holes in a gravelly bottom, where they deposit their spawn, and if they meet with a stone of two pound weight, they remove it, and throw it out. They are seldom angled for purposely, but are sometimes caught with worms in angling for other fish. After spawning, they hasten to the sea, leaving their brood, which hide in the sand, and in about three months grow to be about five inches long, and afford

afford good sport to the school boys, who throw them, together with the sand, upon the banks of the river.

Having thus described the various kinds of fresh-water fish, before we quit this chapter, we shall say something concerning the

### L A W S O F A N G L I N G .

The laws of England being all public, ignorance of their contents excuses no offender. It will not be amiss therefore to say something of those which concern the angler, that he may have a certain knowledge how, without offence, to demean himself amongst his neighbours when he goes about his sport.

Whoever fishes in the river Severn with, or shall make use of, any engine or device, whereby any salmon, trout, or barbel, under the length appointed by the stat. 1 Eliz. cap. 17. shall be taken or killed, or shall fish with any net for salmon-peale, pike, carp, trout, barbel, chub, or grayling, the mesh whereof shall be under two inches and a half square from knot to knot, or above twenty yards in length and two in breadth, or above fifty in length and six in breadth in the wing of the net, in the said river, from Ripplelock-Stake to Gloucester-Bridge, or above sixty in length below Gloucester-Bridge, and six yards in breadth in the wing of the net; or shall fish with more than one of these nets at once, or shall use any devise for taking the fry of eels, shall forfeit five shillings for every offence; and the fish so taken, and the instruments, to be divided between the prosecutor and the poor. 3 Car. II.

If any person shall keep any net, angle, leap, piche, or other engine for taking fish, (except the makers or sellers of them, or the owners or occu-  
piers

piers of rivers or fisheries) such engines, if they shall be found fishing without the consent of the owner, shall be seized; and any person, by a warrant under the hand and seal of a justice of peace, may search the houses of persons prohibited and suspected, and seize to their own use, or destroy such engines. 4 & 5 W. & M. cap. 23.

No servant shall be questioned for killing a trespasser within his master's liberty, who will not yield, if not done out of former malice; yet if the trespasser kills any such servant, it is murder. 21 Eliz.

None shall unlawfully break, cut down, cut out, or destroy any head or heads, dam or dams, of any ponds, pools, moats, stagnes, stews, or separate pits, wherein fish are, or shall happen to be put by the owners or possessors thereof; or shall wrongfully fish in the same, to the intent to destroy, kill, take, or steal away, any of the same fish, against the mind of the owners thereof, without licence of the owner, on pain of suffering three months imprisonment, and to be bound to good behaviour for seven years after; and the party, in sessions or elsewhere, shall recover treble damages against the delinquents. 5 Eliz.

None shall erect a weir or weirs along the sea-shore, or in any haven or creek, or within five miles of the mouth of any haven or creek, or shall willingly take or destroy any spawn, fry, or brood of any sea-fish, or pain of ten pounds, to be divided between the King and the prosecutor. Neither shall any fish in any of the said places with any net of a less mesh than three inches and a half between knot and knot, (except for smoulds in Norfolk only) or with a canvas net, or other engine, whereby the spawn or fry of fish may be destroyed, on pain of forfeiting the said net or engine, and ten shillings in money.

money, to be divided between the poor and the prosecutor. 3 Jac. cap. 12.

By the statute of 17 Rich. II. cap. 9. justices of the peace shall be conservators of the statute of Westm. 2. cap. 47. and 13 Rich. II. cap. 19. and shall have power to search all weirs, lest by their straitness the fry of fish may be destroyed. And the said justices shall have power to appoint and swear under-conservators, and to hear and determine offences of this kind, and to punish the offenders by imprisonment and fine, whereof the under-conservator which informs is to have half. The mayor or wardens of London have, by the same statute, like power in the Thames, from Staines to London, and in the Medway as far as the city grant extends. And every justice of peace before whom such offender shall be convicted, may cut in pieces, and destroy all and every the nets and engines whatsoever, wherewith the offender is apprehended.

Barbel is not to be taken under twelve inches long; the penalty is twenty shillings, the engine, and the fish.

Herrings are not to be sold before the fishermen come to land, and must not be brought into Yarmouth Haven between Michaelmas and Martinmas; the penalty is imprisonment and forfeiture of the herrings.

Lobsters must not be sold under eight inches from the peak of the nose to the end of the middle fin of the tail; the forfeiture is one shilling for each lobster.

Pike must not be taken under ten inches: the forfeiture is twenty shillings, the fish, and the engine they are taken with.

Salmon is not to be sent to London to fishmongers, or their agents, weighing less than six pounds; and

and every person that buys or sells such, shall be liable to forfeit five pounds, or be sent to hard labour for three months.

In the rivers Severn, Dee, Thame, Were, Tees, Ribble, Mersey, Dun, Air, Ouze, Swale, Caldor, Eure, Darwent and Trent, no person is to lay nets, engines, or other devices, whereby the spawn or small fry of salmon, or any kepper or shedder salmon, under eighteen inches long from the eye to the middle of the tail, shall be taken, killed, or destroyed. Nor shall they make, erect, or set any bank, dam, hedge, flank, or nets, cross the said rivers, to take the salmon, or hinder them from going to spawn; nor shall they kill salmon in the said rivers between the twelfth of August and the twenty-third of November, or fish with unlawful nets, under the penalty of five pounds for every offence; and for want of distress, to be sent to hard labour for not less than one month, nor more than three months.

Those that use any net or engine to destroy the spawn or fry of fish, or take salmon or trout out of season, or the latter less than eight inches long, or use any engine to take fish otherways than by angling, or with a net of two inches and a half mesh, forfeit twenty shillings a fish, and the net or engine.

Those that sell, offer, or expose to sale, or exchange for any other goods, brett or turbot under sixteen inches long, brill or pearl under fourteen, codlin twelve, whiting six, bass and mullet twelve, sole, plaice and dab, eight, and flounder seven, from the eyes to the utmost extent of the tail, are liable to forfeit twenty shillings by distress, or to be sent to hard labour for not less than six, or more than fourteen days, and to be whipped.

Every one who between the first of March and the last of May shall do any act whereby the spawn  
of



of fish shall be destroyed, shall forfeit forty shillings and the instrument.

*Extract from the Fish-Act of 1765.*

No one shall enter into a park or paddock fenced in and inclosed, or into any garden, orchard, or yard, adjoining or belonging to any dwelling-house, in or through which park or paddock, garden, orchard, or yard, any river or stream of water shall run or be, or wherein shall be any river, stream, pond, pool, moat, stew, or other water, and by any ways, means, or device whatsoever, shall steal, take, kill, or destroy, any fish bred, kept, or preserved, in any such river or stream, pond, pool, moat, stew, or other water aforesaid, without the consent of the owner or owners thereof; or shall be aiding or assisting in the stealing, taking, killing, or destroying, any such fish, as aforesaid; or shall receive or buy any such fish, knowing the same to be so stolen or taken, as aforesaid; and being thereof indicted within six calendar months next after such offence or offences shall have been committed, before any judge or justices of jail delivery for the county wherein such park or paddock, garden, orchard, or yard, shall be, and shall on such indictment be, by verdict, or his or their own confession or confessions, convicted of any such offence or offences, as aforesaid, the person or persons so convicted shall be transported for seven years.

And, for the more easy and speedy apprehending and convicting of such person or persons as shall be guilty of any of the offences before mentioned, be it farther enacted by the authority aforesaid, that in case any person or persons shall, at any time after the first day of June, commit or be guilty of any such offence or offences, as are herein before mentioned,

tioned, and shall surrender himself to any one of his Majesty's justices of the peace in and for the county where such offence or offences shall have been committed; or, being apprehended and taken, or in custody, for such offence or offences, or on any other account, and shall voluntarily make a full confession thereof, and a true discovery, upon oath, of the person or persons who was or were his accomplice or accomplices in any of the said offences, so as such accomplice or accomplices may be apprehended and taken, and shall, on the trial of such accomplice or accomplices, give such evidence of such offence or offences, as shall be sufficient to convict such accomplice or accomplices thereof; such person making such confession and discovery, and giving such evidence as aforesaid, shall, by virtue of this act, be pardoned, acquitted, and discharged, of and from the offence or offences so by him confessed, as aforesaid.

That in case any person or persons shall take, kill, or destroy, or attempt to take, kill, or destroy, any fish, in any river or stream, pond, pool, or other water, (not being in any park or paddock, or in any garden, orchard, or yard, adjoining or belonging to any dwelling-house, but shall be in any other inclosed ground which shall be private property) every such person, being lawfully convicted thereof by the oath of one or more credible witness or witnesses, shall forfeit and pay, for every such offence, the sum of five pounds, to the owner or owners of the fishery of such river or stream of water, or of such pond, pool, moat, or other water: and it shall and may be lawful to and for any one or more of his Majesty's justices of the peace of the county, division, riding, or place, where such last-mentioned offence or offences shall be committed, upon complaint

plaint made to him or them, upon oath, against any person or persons, for any such last-mentioned offence or offences, to issue his or their warrant or warrants, to bring the person or persons so complained of, before him or them; and, if the person or persons so complained of shall be convicted of any of the said offences last mentioned, before such justice or justices, or any other of his Majesty's justices of the same county, division, riding, or place aforesaid, by the oath or oaths or one or more credible witness or witnesses, which oath such justice or justices are hereby authorised to administer; or by his or their own confession; then, and in such case, the party so convicted shall, immediately after such conviction, pay the penalty of five pounds, hereby before imposed for the offence or offences aforesaid, to such justice or justices before whom he shall be so convicted, for the use of such person or persons as the same is hereby appointed to be forfeited and paid unto; and, in default thereof, shall be committed by such justice or justices to the house of correction, for any time not exceeding six months, unless the money forfeited shall be sooner paid.

Provided nevertheless, that it shall and may be lawful to and for such owner or owners of the fishery of such river or stream of water, or of such pond, pool, or other water, wherein any such offence or offences last mentioned shall be committed as aforesaid, to sue and prosecute for and recover the said sum of five pounds, by action of debt, bill, plaint, or information, in any of his Majesty's courts of record at Westminster; and in such action or suit, no essoin, wager of law, or more than one imparlance shall be allowed; provided that such action or suit be brought or commenced within six calendar months

months next after such offence or offences shall have been committed.

Provided always, and be it farther enacted by the authority aforesaid, that nothing in this act shall extend, or be construed to extend, to subject or make liable any person or persons to the penalties of this act, who shall fish, take, or kill, and carry away, any fish, in any river or stream of water, pond, pool, or other water, wherein such person or persons shall have a just right or claim to take, kill, or carry away, any such fish.

#### C H A P. VII.

*An Account of some of the principal SEA FISH, their Nature, Qualities, and the Manner of catching them, &c.*

**T**HE WHALE is by far the largest of all the inhabitants of the sea, and is chiefly caught in the North Sea. Some of those taken at Spitzbergen are two hundred feet in length. Those on the coast of America are about ninety, or an hundred; and those on the coast of Guienne, and in the Mediterranean, are the smallest of all.

There are two sorts of whales, one of which is called cachelot, whose mouth is furnished with little flat teeth; whereas the true whale has none, but instead thereof has a kind of whiskers in his throat about a span broad, and fifteen feet long, ending in a sort of fringe like hogs bristles; they are set in the

G palate,

palate, and do in some measure the office of teeth. Of these whiskers, cut into a proper breadth, is made whalebone, which the generality erroneously think is taken from the fins of this monstrous fish.

The whale, properly so called, has likewise no fins on his back, but has two behind his eyes, of a bigness proportionable to the bulk of the whale; they are covered with a thick black skin, curiously marbled with white strokes, which look like veins in a piece of wood. When these fins are cut up, there appear bones underneath, resembling a man's hand; there likewise appear between them very stiff sinews, which are so hard, that they will rebound if flung against the ground. These are all the fins that a whale has, and with these he steers himself as if a boat was rowed with oars.

The tail does not stand upright as the tail of almost every other fish, but lies in a horizontal position, and is about six or eight yards broad. The head is the third part of the length of the fish, and on the fore part of the upper and under lip there are short hairs. The lips are crooked, somewhat like an *s*, on the uppermost of which there are black streaks mixed with brown. Their lips are smooth and quite black, and when they are shut, they lock one within the other.

The whalebone, as we term it, is, as was observed before, in his mouth and throat; of this the middlemost pieces are the longest; there are about five hundred of them in all, and between every one there is room enough to put one's hand.

In the midst of these pieces lie the tongue, which is large and white, but on the edges spotted with black. It consists of a soft spongy fat, which cannot easily be cut; for which reason they fling it away.

On



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On the top of the head, and before the eye, is placed what they call the hovel, or bump, in which are two spout holes. Out of these holes he blows the water so very fiercely that it roars like a hollow wind, or an organ pipe; it is so very loud, that it may be heard at the distance of a league, when the whale is not to be seen by reason of the foggy air. He blows out the water the fiercest of all when he is wounded; and then the noise resembles the roaring of the sea in a great storm.

The head of the whale is not round at the top, but flat, and slopes downward like the eiling of a house, till it comes to the under lip. In short, the whole fish is shaped like a shoemaker's last, if you look on it from beneath.

His eyes are placed near the corner of the mouth, and are not much bigger than those of an ox. They have eyelids and hair upon them, like the eyes of a man. The crystalline humour is not much bigger than a pea, and is clear, white, and transparent.

His back and sides are quite red, but underneath the belly they are commonly white, though some are of a jet black.

They make a beautiful appearance in the water when the sun shines, for as the waves of the sea rise up and are dashed against him they shine like silver. Some of them are marbled on the back and tail, and wherever they are wounded there always remains a white scar.

Those Whales that are black are not so in an equal degree, for some are as deeply black as velvet, others as coal, and others again are of the colour of a tench.

The skin of this fish is almost as slippery as that of an eel, but this does not hinder a man from

standing upon him, because the flesh being soft, sinks downward with his weight, and makes a sort of a hole. The outward or scarf skin is as thin as a parchment, and is easily taken off with one's hands when the fish is hot; but it is of little or no use.

The *penis* of the whale is of a tendinous nature, and is six, seven, and eight feet long, according to the bigness of the fish; it lies in a doubling of the skin, just like a knife in the sheath when the haft only appears. The *pudendum* of the female is shaped like that of a mare or cow. On each side of it grow two udders with nipples, like those of a cow; some of these are all over white, some are speckled with black and blue spots, like a lapwing's egg. When they have no young ones their udders are small. In the act of coition they stand upright with their heads out of the water, embracing each other with their fins.

It is supposed they never have more than two young ones at a time, because, there have never been found more than two in their bellies when they have been cut open. How long they go with young is altogether uncertain.

In the year 1658, a skeleton of a whale was publicly shewn at Paris. The skull was between sixteen and seventeen feet long, and weighed 4600 pounds.

The flesh is coarse and hard, looking like that of a bull, and is full of sinews; it is very dry and lean when boiled, because the fat of a whale lies only between the flesh and the skin. Some parts of it look blue and green like powdered beef, especially at the joining together of the muscles. The tail is the tenderest part, and is not so dry as that of the body. It may be eaten safely when there is nothing better

to

to be got; for those that have eaten of it daily have found no bad effects from it.

The drug called *sperma ceti*, is the brain of the cachelot or male whale, which, when it is taken out of the skull is melted over a gentle fire, and then it is cast into moulds, like those in which sugar is refined; after it is cooled and drained from the oil, they take it and melt it again, repeating the operation till it is well purified, and very white. Then with a knife made for that purpose, they cut into flakes in the same manner as it appears when it comes to us.

The chief place where whales are caught, is on the western coast of Spitzbergen, from the latitude 76 degrees 40 minutes, to 80 degrees; the establishment at Greenland not succeeding to satisfaction.

The Dutch have upwards of three hundred years had a large share of the whale fishery, and it is now esteemed one of the principal branches of their extensive trade. The chief merchants of their flourishing provinces associate themselves into a body for the carrying it on, and send every year a fleet of vessels to the North Seas for that purpose.

In the year 1728 the South-Sea Company began to share with them, in which they met with pretty good success at first, but it afterwards dwindled away till the year 1740, when the Parliament thought fit to give farther encouragement in it, by which means we are become powerful rivals of the Dutch, and now sell both oil and whalebone to several parts of the world.

The COD or KEELING, is a fish of about three feet long or upwards; those that are small are called Codlings. It has different names from the different places where it is taken, and from the different man-

ner of curing it; hence it is called green fish, Iceland fish, Aberdeen fish, North-sea Cod, Stock fish, Poor John, and barrelled Cod.

It is a thick round fish, with a large head and a prominent belly. It is brown on the back, white underneath, and is full of yellow spots. The scales are small, and stick close to the skin; the eyes are large and covered with a loose transparent skin; on the lower jaw is a barb of about an inch long; the tongue is broad, round, soft and smooth, there are several rows of teeth in the jaws, one of which is longer than the rest. There are likewise teeth on the palate and in the throat.

The stomach is large, and is often found full of small fish, particularly herrings.

The flesh is exceeding good, and highly esteemed. It is greatly in use as well fresh as salted, and in Lent, it goes by the general name of salt fish. The head of a large cod is thought by those who are judges of nice eating, to be a most excellent dish.

Fresh cod, that is cod for present use, is caught every where on the coast of Great Britain; but there are particular times of fishing in particular places, because they are then found in great plenty. Thus from Easter to Whitsuntide is the best season at Alanby, Workington, and Whitehaven, on the coasts of Lancashire and Cumberland; on the west part of Ireland from the beginning of April to the beginning of June; on the north and north-east of Ireland from Christmas to Michaelmas; and on the north-east of England from Easter till Midsummer.

But the chief support of the cod fishery are the banks of Newfoundland, which are a kind of submarine mountains, one of which, called the Great Bank, is four hundred and fifty miles long and an hundred

hundred broad, and seventy-five from Newfoundland. The best, largest and fattest cod, are those taken on the south side of the bank, those on the north side are much smaller.

The best season for fishing for them is from the beginning of February to the end of April, at which time the fish, which had retired during the winter to the deepest part of the sea, return to the bank and grow very fat.

Those that are taken from March to July keep well enough, but those in July, August, and September, soon spoil. The fishing is sometimes done in a month or six weeks, sometimes it holds six months.

When Lent begins to draw near, though the fishermen have caught but half their cargo, yet they will hasten homewards, because the markets are best at that time; and some will make a second voyage before others have got a sufficient cargo for the first.

Each fisher can take but one at a time, and yet the most expert will catch from three hundred and fifty to four hundred in a day. They are all taken with a hook and line, baited with the entrails of other cod except the first. This is very fatiguing, both on account of the heaviness of the fish, and the coldness of the weather; for though the Great Bank lies from forty-one to forty-two degrees of latitude, yet the weather, in the season of fishing, is very severe.

The usual salary allowed to the Captain and sailors, is one third of the cod that they bring home sound.

They salt the cod on board the ship in the following manner: they cut off the head, open the belly and take out the guts, then the salter ranges



them side by side at the bottom of the vessel, and head to tail, a fathom or two square; when one layer is complete he covers it with salt, and then lays on another which he covers as before; and thus he disposes of all the fish caught in the same day, for care is taken not to mix those of different days together. After the cod has lain thus three or four days, they are removed to another part of the vessel, and salted afresh; and then it is suffered to lie till the vessel has its burthen. Sometimes they are put into barrels for the conveniency of carriage.

The principal place for fishing for cod which is designed to be dried is along the coast of Placentia in Newfoundland, from Cape Race to the Bay of Experts, within which limits there are several commodious ports for the fish to be dried in,

In this fishing vessels of all sizes are used, but those are most proper which have large holds, because the fish have not a weight proportionable to the room they take up.

The time of fishing is in the summer season, for the conveniency of drying the fish in the sun; on which account European vessels are obliged to set out in March or April; for as for those that begin their voyage in June or July, their design is only to purchase cod that are already caught and prepared by the inhabitants of the English colonies of Newfoundland and the neighbouring parts, in exchange for which we carry them meal, brandy, linen, molasses, biscuits, &c.

The fish which they choose for drying is of a smaller sort, which is the fitter for their purpose, because the salt takes more hold of it.

When the fishing vessels arrive at any particular part, he who touches ground first is entitled to the quality

quality or privileges of Admiral, has the choice of his station, and the refusal of all the wood on the coast.

As fast as they arrive they unrig all their vessels, leaving nothing but the shrouds to sustain the masts; in the mean time the mates provide a tent on shore, covered with branches of fir and sails over them, with a scaffold fifty or sixty feet long, and twenty broad: while the scaffold is building the crew apply themselves to fishing, and as fast as they catch any fish they open them and salt them on moveable benches, but the main salting is performed on the scaffold.

When the fish have taken salt, they wash them, and lay them in piles on the galleries of the scaffold, to drain; after this they range them on hurdles only a fish thick, head against tail, with the back uppermost. While they lie thus, they take care to turn and shift them four times in every twenty-four hours.

When they begin to dry they lay them in heaps ten or twelve a-piece, to retain their warmth, and continue to enlarge the heap every day till it is double its first bulk; at length they join two of these heaps into one, which they continue to turn every day as before, and when they are thorough dry, they lay them in huge piles as large as hay-stacks.

Besides the body of the fish, there are the tripes and tongues, which are salted at the same time with the fish and barrelled up. Likewise the roes being salted and barrelled up, are of service to throw into the sea to draw fish together, particularly pilchards. The oil is used for dressing leather and other purposes, in the same manner as train oil.

When

When cod leave the banks of Newfoundland, they go in pursuit of whittings, and it is owing to this that the return of the whittings is frequent on our coast.

On the coasts of Buchan, the Scots catch a small kind of cod, which is highly prized; they salt it and dry it in the sun upon the rocks, and sometimes in the chimney; but the greatest part of it is spent at home.

The TORTOISE, or TURTLE, is a kind of an amphibious animal, living both by land and water. They are covered with a fine large oval shell, which is marbled with various colours. Their sizes are different, but they are often met with in America five feet long and four broad.

There are four sorts of Tortoises, called by sailors, the trunk turtle, the loggerhead, the hawks bill, and the green turtle. The trunk turtle are commonly bigger than the rest, and their backs are higher and rounder. The flesh of this sort is rank, and not very wholesome. The loggerhead is so called from the largeness of its head, it being much bigger than those of the other sorts: the flesh of this is likewise rank, and not eaten but in case of necessity. The hawks-bill turtle is the least of the four; they have long and small mouths, something resembling the bill of a hawk; on the back of this turtle grows the shell that is so much esteemed in Europe for making combs, boxes, &c. Some of them carry three pounds, others which are very large, six pounds of shell. It consists of thirteen leaves, or plates, of which eight are flat, and five hollow. They are raised and taken off by means of fire, which is made under it when the flesh is taken out; as soon as the heat affects the leaves, they are easily raised with the point of a knife. The flesh

flesh is but ordinary food, but sweeter and better than that of the loggerhead; yet sometimes it purges both upwards and downwards, especially between Samballoes and Porto Bello.

The green turtle are so called, because the shell is greener than any other. It is very clear, and better clouded than that of the hawks bill; but it is so exceeding thin, it is used only for inlaying. These turtles are generally larger than the hawks bill, and weigh sometimes two, sometimes three hundred pounds. Their heads are round and small, and their backs flatter than the hawks bill.

The turtle is a dull, heavy, stupid animal, their brain being no bigger than a small bean, though their head is as big as a calf's; but they have a very good eye, and a quick sight. Their flesh looks so like beef, it would hardly be distinguished from it, if it was not for the colour of the fat, which is of a yellowish green.

They feed upon moss, grass, and sea weed, unless in the time of breeding, when they forsake their common haunts, and are supposed to eat nothing. Both the male and female are fat the beginning of this season, but before they return, the male becomes so lean that he is not fit to eat, while the female continues in good plight, and eats well to the very last. They couple in the water, and are said to be nine days in performing the work. They begin in March, and continue till May.

This coupling time is one of the principal seasons of fishing for them. They are very easily discovered when they are in the action, the male being upon the back of the female. As soon as they are perceived, two or three people approach them in a canoe, and either slip a noose round their necks, or one of their feet; or if they have no line, they lay hold

hold of them by the neck, where they have no shell, with their hands only, and by this means catch them both together; but sometimes the female escapes, being more shy than the male.

Another way of taking them, at this time, is with the spear; which being thrown at the back of the turtle, pierces the shell, and sticks as fast in it as if it were solid oak. He struggles hard to get loose, but all to no purpose, for they take care that the line which is fastened to the spear be strong enough to hold him.

The time of taking turtle upon land is from the first moon in April to that in August, being the season in which these creatures lay their eggs. The quantity which they lay is prodigious, being at least several hundreds in a season. The night before she lays, she comes and takes a view of the place, and after taking one turn about it, she goes to sea again, but never fails to return the night following.

Towards the setting of the sun, they are seen drawing to land, and seem to look earnestly about them as if they feared an ambuscade. If they perceive any person on shore, they seek for another place; if otherwise, they come on shore when it is dark. After they have looked carefully about them they begin to work and dig in the sand with their fore feet till they have made a round hole of a foot broad and a foot and a half deep a little above where the water reaches when highest; this done, they lay eighty or ninety eggs at a time as big as a hen egg, and as round as a ball; she continues laying about the space of an hour, during which time if a cart was to be driven over her she would not stir. The eggs are covered with a white tough skin like wetted parchment. When she has done laying she

covers



covers the hole so dextrously that it is no easy matter to find the place; after this she returns to the sea. At the end of fifteen days she lays again in the same manner, and at the end of another fifteen likewise, laying three times in all.

In about twenty-five days after laying, the eggs are hatched by the heat of the sand, at the end of which term, the little turtles, being as big as young quails, run directly to the sea without any guide to lead them. Those that are taken by the way are generally fried whole, and are said to be delicious meat.

The men that stand to watch for the turtle, turn them on their backs, which is not performed without some difficulty, for they are very heavy and struggle hard. After this he hales them above high-water mark, and leaves them till morning; for when they are once on their backs they are not able to stir from the place.

As a turtle enjoys the benefit of lungs, she can by sucking in the air, bring herself to an equilibrium with the water. She is also able to swim like other animals by the motion of her paws, though most commonly she contents herself with creeping.

The turtle, as was said before, feeds upon grass and weeds, and this she does on the land as well as in the water. Near several of the American islands there are a sort of green meadows at the bottom of the sea which is not many fathom deep in those parts, for which reason when the weather is fine and the water smooth, they may be seen creeping on this green carpet at the bottom of the sea. After they have fed sufficiently they take their progress into the mouths of rivers for fresh water, where they likewise take in the refreshing air, and then return to their former station. When they have done feeding

ing they generally float with their heads above water, unless they are alarmed by the approach of hunters or birds of prey, in which case they suddenly plunge to the bottom.

A turtle of an ordinary size and of the best sort will yield at least two hundred pounds of flesh, which the sailors take care to salt, and near three hundred eggs, which will keep a considerable time.

The shell may be fashioned in whatever manner the workman pleases, by softening it in warm water and putting it into a mould, for it immediately takes the impression by the assistance of a strong iron press, and may be afterwards adorned and embellished at pleasure.

The **TURBOT**, or **BRET**, in the southern parts of England, is called a Turbot, but in the northern a Bret.

The size of this fish seldom exceeds a yard in length, nor two feet and a half in breadth. Though he has no scales, he has a rough granulated skin, full of exceeding small prickles, placed without order on the upper part. The colour of the same part is ash, diversified with a great number of black spots; the lower part is white.

The London markets are wholly supplied with this fish by the Dutch, who to the scandal of the British fishermen, it is computed carry out of the kingdom upwards of thirty thousand pounds annually; and in the space of three months, beginning in May and ending the end of July or beginning of August, they are chiefly to be found on the Dogger Bank, but in the months of January, February, and March, they are to be had in pretty great plenty on the coast of Devon and Cornwall, of equal goodness with those caught by the Dutch.

The

The flesh is white, firm, delicate and wholesome; and is so highly esteemed by some, as to be preferred before all the inhabitants of the water.

It is a fish of prey and lives upon others, particularly crabs.

The SKATE or FLARE is a gristly fish, with a flat, smooth, and very broad body. It grows to a very large size, for some have been taken that have weighed above an hundred pounds; but what is still more extraordinary, there was one sold by a fishmonger at Cambridge to St. John's College, which weighed two hundred pounds, and dined one hundred and twenty persons. It was carefully measured, and the length was forty-two inches, and the breadth thirty-one. Those of the size here mentioned are very coarse and rank, the finest being from twenty to forty pounds weight.

The colour on the upper part is a pale ash, very much spotted with black. The under part is white.

All fish of this sort when first taken, have a rankish taste, which by keeping a little vanishes. They are most in season in the winter, for then they do not smell so strong, and their taste is more pleasant.

They delight to feed in muddy places not far from the shore. They are found in great plenty on all the sea coast of Great Britain.

The SOAL is a flat longish fish, in shape much like the sole of a shoe, from whence it derives its name. It is often seen of the length of a foot and sometimes a little longer. The upper part of a dark ash colour and the lower white.

They are caught in large quantities on the coast of Devon and Cornwall, from whence the markets of London are supplied by land carriage.

The

The flesh is more firm and solid than that of a plaice; for sweetness of taste, the plenty of nourishment it affords, and the goodness of its juice, far excels it; for which reason in some countries they stile it the Sea Partridge.

### THE END.

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